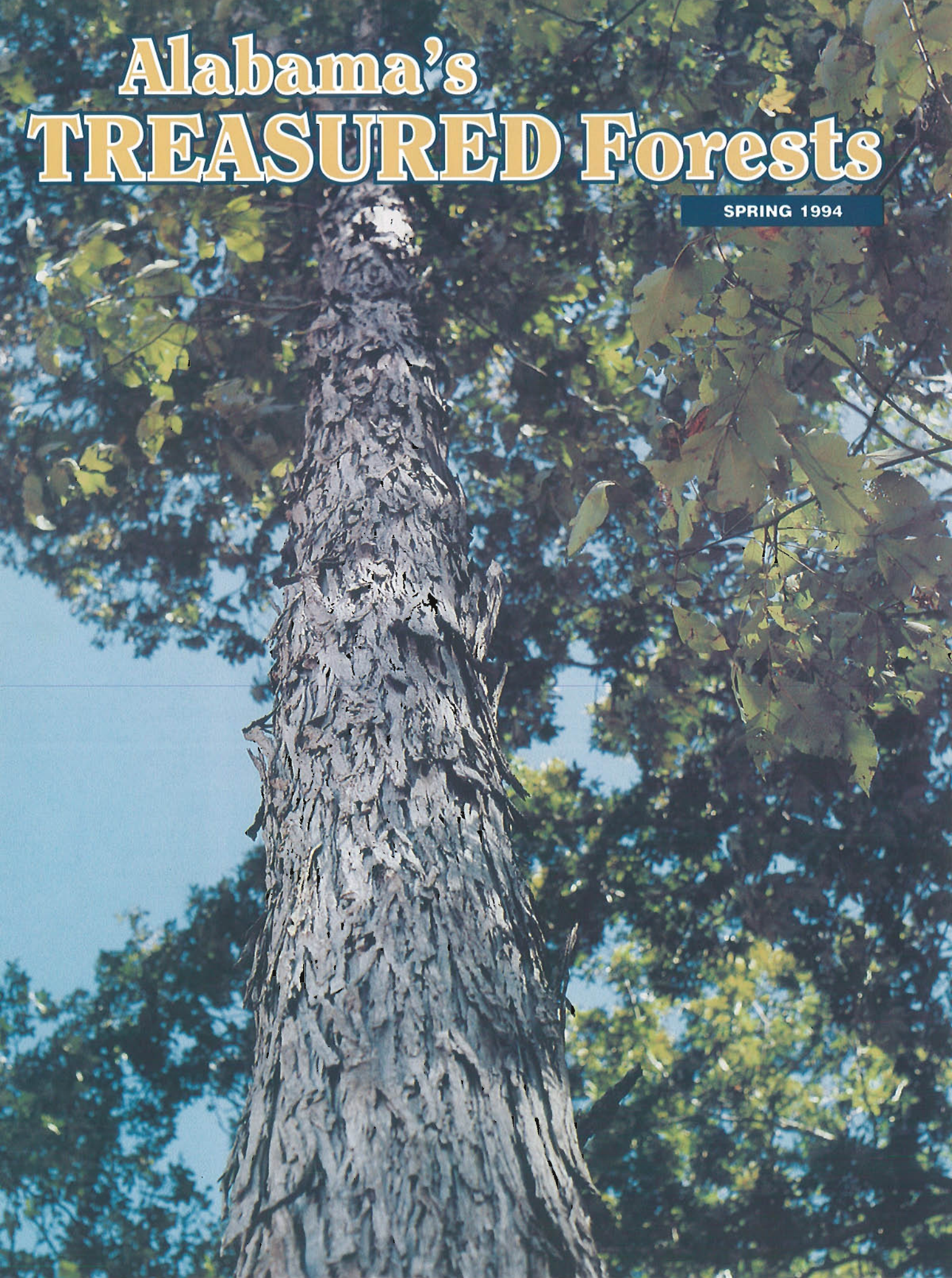


# Alabama's **TREASURED** Forests

SPRING 1994



# STATE FORESTER'S MESSAGE

by TIMOTHY C. BOYCE, State Forester



**I**t has been said that getting something done is an accomplishment: getting something done right is an achievement. Certainly the efforts accomplished to produce the tremendous forests we all value can be called an achievement. The return of the southern forest over the past 100 years is one of the greatest success stories in modern times.

Alabama is one of the leading forestry states, with forest products being our number one manufacturing industry. Our lands are in their most productive state historically, and our forests increase each year because we continue to grow more timber than we harvest. At the same time, Alabama has the third highest biological diversity of any state in the nation.

Recently, many landowners have become concerned about government's changing role. Poorly explained and poorly written regulations have put many people into a state of confusion and resentment. Because of these situations, some landowner groups encourage their members to not allow any government employees on their land. This change from government being a helper to being

an obstacle will hurt forestry and the economic and environmental health of our state and nation.

When people plant trees they are betting on the future. A tree planted today will not return a benefit to the landowner until far into the future. Many landowners are now becoming concerned that excessive government regulations will prevent them from ever benefitting from their investments.

Forestry is an expensive investment with a long time frame and many natural risks such as fire, insects, and disease. An atmosphere of excessive regulations leading to possible loss of control over private land will lead to less investment in our forest resource, resulting in a reduced timber supply and other forest resource values. Many of our future opportunities could be curtailed.

Timber production in the Pacific Northwest is falling tremendously. The nation is looking to the South to make up for that loss. We need wood to run our economy, to build and furnish homes, and to provide the paper items that we use each day. Right now we have plenty of wood to supply the nation's need, but I am concerned about the future. Ninety-five percent of the forestland in Alabama is privately owned, and we need to encourage these landowners to invest in future forests. We do not need to foster an atmosphere that discourages forestry investments.

The proposed Alabama Regulatory Impact Act of 1994, Senate Bill 349, will go a long way to help provide the proper atmosphere to stimulate continued investments in our forests. It is a statement which says that in the future our government will not impose excessive regulations that increase the risk of forestry investments and prevent families from receiving the full benefits of the property on which they pay taxes. Hopefully, by the time you read this the bill will have passed.

As the old saying goes, the toughest thing about being a success is that you've got to keep on being a success. We must continue to recognize the basic elements that have produced for all Alabamians such a productive forest. They are private ownership of land, strong reliable markets, technical assistance to landowners, strong forest fire and insect and disease protection programs, and programs that foster creativity and enthusiasm in forestry investments that are supported by the general public.

Sincerely,

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

Timothy C. Boyce  
State Forester

# Alabama's TREASURED Forests

Volume XIII. No. 2

Spring 1994

## COMMISSIONERS

Carol Jean Grisham, *Chairman*  
Cecil Tanner, *Vice Chairman*  
John Barfield  
Charlie Hamilton  
Milton Loughridge  
Guice Slawson  
Claude S. Swift

## STATE FORESTER

Timothy C. Boyce

## ASSISTANT STATE FORESTER

Richard H. Cumbie

## ALABAMA FORESTRY PLANNING COMMITTEE

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

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

## EDITORIAL BOARD

Brian Bradley                      John C. Kummel  
David A. Frederick                Tommy Patterson

EDITOR .....Kim Gilliland

ASSISTANT TO EDITOR .....Alexis London

## TECHNICAL ADVISORS

Don Burdette .....Water Quality  
Tom Cambre .....Hardwoods  
James Hyland .....Forest Health  
Louis Hyman .....Taxes  
Neil Letson .....Urban Forestry  
Tommy Patterson .....TREASURE Forest  
Stan Stewart .....Wildlife  
Walter Vest .....Forest Law Enforcement

## CONTENTS

<b>A Family TREASURE / by KIM GILLILAND</b> .....	4
<b>Preplanning a Multiple Use Forest Timber Sale / by DOUG LINK</b> .....	7
<b>Between Rome and Dixie</b> .....	10
<b>Living With Beaver / by NICK WALTERS</b> .....	12
<b>Longleaf Pine as a Planting Option / by MARSHALL THOMAS</b> .....	15
<b>A Historical View of Cost-Share Tree Planting / by TIM GOTHARD</b> .....	18
<b>Today's Logger: Ready for the 21st Century?</b> .....	19
<b>Managing Vegetation with Goats / by DR. PETER MOUNT</b> .....	21
<b>Managing Forests for Wildlife: Part II / by STAN STEWART</b> .....	22
<b>What Are Super Seedlings? / by JOHN RICE</b> .....	25
<b>Planting Acorns by the Ton / by PHILIP WILSON</b> .....	27
<b>Seeing Scenic Alabama: Part II / by DOUG PHILLIPS</b> .....	28
<b>Facts About Growing Christmas Trees / by LOYD OWENS</b> .....	31
<b>Approved Amendment Will Provide Funding for Firefighters / by ROY MOTT</b> .....	32

## DEPARTMENTS

<b>State Forester's Message</b> .....	2
<b>Editor's Understory</b> .....	6
<b>Landowners Legislative Alert</b> .....	16

**COVER:** Shagbark hickory is named for the characteristic light gray bark that separates into thick plates which curl outward. The prime use of grade hickory is tool handles which require high shock resistance.

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

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

# A FAMILY TREASURE

by KIM GILLILAND, Editor

Over the past decade America has seen its farmers go through some tough times. It's difficult to find a farming family who derives its income solely from the land. In rural Conecuh County, however, the Stacey family is proving farmers are still alive and well in Alabama. Skip, Brenda, Wendy and Chip Stacey are authentic examples of American farmers making a living in the 1990s.

The 1,400-acre TREASURE Forest, located near the city of Evergreen, Ala., is used to the fullest by the Staceys. While cattle is the primary income-producing aspect of the farm, the Staceys also grow and sell hay and feed, and run a firewood business. Timber, which is the primary objective of the TREASURE Forest, is managed to provide an income as well.

## Family Hunting Club

To help the family over some financial hurdles, a hunting club was established 18 years ago. While many TREASURE Forest landowners operate hunting clubs, the Staceys place a special emphasis on family that isn't normally found. Only families are accepted for membership, and there's something for everyone to do on the farm 12 months out of the year. The Staceys currently have 16 families who are members of the club, and there's a waiting list to join. The families are mostly from the southern part of Alabama, but hail from Florida as well. They all have one thing in common, though — a love for nature and outdoor recreation. As Skip has observed, even though the families are from different areas and have a broad range of occupations, they all feel at home on Stacey Farms. "It pleases me to see those people mingle," he said.

A horseshoe-shaped lake is a favorite fishing spot.



The families are allowed to bring their own trailers and park them on the property so they have a place to stay together. The Staceys enjoy hosting the club members any time they can get away. Since vacations are few and far between, the club members provide some entertainment for the Staceys as well. "Our recreation is seeing them," said Brenda.

A high point of the year for club members is "Family Day," which is held by the Staceys every fall. Different activities are planned for children and adults, and the events are changed each year. The highlight of Family Day 1993 was a treasure hunt. Clues were placed around the property and gift certificates were given as prizes. A club business meeting and wild game dinner is held annually at the end of deer season. Club members are asked for input on how the club is developing and suggestions are made for ways to improve operations.

While hunting is a major activity for club members, there's also horseback riding, camping, fishing, and nature walks to keep everyone occupied. The Staceys own four horses which are available for guests to ride. "It's rewarding to us to see how much they enjoy it," Brenda says. "We have a lot of friends and we have a lot to be thankful for."

The wildlife is abundant, with large populations of deer, turkey, quail and doves. The property has been under the Department of Conservation's Deer Management Program for about five years. Food plots are planted with a variety of things for wildlife: corn, ryegrass, clover, wheat and chufas. The food plots planted in corn are surrounded by a circle of winter grasses.

### Forestry Operations

Obviously wildlife is important to this TREASURE Forest because of the hunting club, but other aspects of multiple-use management are also emphasized. "Our goal is to preserve what we have and make it better," said Skip. While most of the work is done by family members and some part-time help, advice on the management of their forestland is gathered from professional organizations or consultants.

The Staceys are in the process of letting pine and hardwoods prevail on their natural sites. About five years ago they decided to look at their timber operations



*A recently thinned pine stand.*

just like other aspects of the farm; in other words, to treat the timber as a crop as well. This was a turning point in the timber management aspect of the farm. Selective cutting is the chosen harvesting method. Areas are thinned every year on a rotating basis, and Skip estimates that over a 10-year period every stand will have been thinned. Any small areas of trees which have to be cut, such as those infected with the southern pine beetle,



*Deer tracks like this one are a common sight.*

are replanted by family members.

During the late 1980s several pine plantations totalling 66 acres were established under the Conservation Reserve Program. These are nestled between mixed stands and food plots, giving the

wildlife on the farm a diverse area to live within.

A snowstorm during the "Blizzard of '93" caused significant damage in several timber stands. During the summer and fall the Staceys salvaged much of this timber. A well-placed road system allows access to every part of the property.

The Staceys are proud of the timber growing in the hardwood bottoms on the property and are preserving most for aesthetic and wildlife purposes.

### Working Together

The entire Stacey family participates in the TREASURE Forest and farming operations. Wendy and Chip put in hard days working alongside their parents and are responsible for many chores. Both are being taught how to safely operate much of the farming equipment. This makes the TREASURE Forest even more special to family, because they have all worked together to make it thrive. "They've certainly had to pitch in and help," says Brenda about her children. "They know that this is their future as well."

In today's fast-paced world, Skip is glad they are able to survive by farming, which is what they love to do. "We're living so fast today. It's an ideal place to raise a family," he says. Daughter Wendy echoes his sentiment. "I would not trade this place for anything in the world." You see, the Staceys not only have a family farm, they have a family TREASURE. ♣

# Editor's Understory

by KIM GILLILAND, Editor

Chip and Wendy Stacey are the fourth generation to grow up on Stacey Farms. Their great-grandfather was a doctor who treated patients at an office on the property. He started farming the place in the 1930s and passed it down to his son, who then passed it on to W.A. "Skip" Stacey, Chip and Wendy's father.



L-R: Skip, Wendy, Marjorie, Chip and Brenda Stacey.

During all those years the property has been diversified and is now an income-producing farm for the Stacey family. Of course, no farm is easy work. The whole family is responsible for keeping the place operating. Each member has a job, whether it be baling hay, filling a customer's feed order, delivering firewood, or planting pine trees. Skip's mother, Marjorie Stacey, and sister Nancy live across the street and are important members of this close-knit family.

Skip and Brenda Stacey have been married almost 19 years, and have known each other almost their entire lives. Brenda started working for the Stacey family when she was seven years old, but it was an interest in horses that brought she and Skip together.

Like many young couples, Brenda and Skip lived in a trailer at first and eventually built their own home. An ingenious

way to get water to their home was developed by Skip when the couple was starting out, and this method is still in use today. Skip chose the best water supply on the farm, a branch about a mile away from their home, as the water source.

The water is transferred to the home and around the farm via a hydraulic ram. The ram is a mechanism based on an ancient

Egyptian principle and works without electricity.

The water is retrieved by a pipe while still underground. The pipe is elevated 15 feet and is gradually lowered to the ground over a distance of 60 feet. At ground level the water runs into the ram, which consists of an air chamber and a

valve. By the time the water reaches the ram it has built up power due to its speed. At a certain velocity the valve closes and the water runs into the air chamber. A rebounding action takes place when pressure builds up, and the water is diverted into another pipe at a 90 degree angle. This action takes place over and over. A mile of pvc pipe transports the water to a holding tank at the Stacey home. The ram pumps about one gallon per minute, and the water in the pipes never freezes

because it's constantly moving.

The home that Skip and Brenda built 10 years ago is nestled among the trees on the edge of the forest, and was made to be energy efficient. Besides a low-cost water pumping system, the house is heated entirely by wood. No air conditioning is present in the home, but summer days are comfortable because of the building's location and fans in the rooms.

The family's interest in farming has been transferred to civic activities. Skip and Brenda are members of the Conecuh Cattlemen's and Cattlewomen's Associations and are volunteer 4-H leaders. As might be expected, Wendy, 15, and 13-year-old Chip are active participants in 4-H, and both show cows and hogs. Their experiences and knowledge gained from the farm have led to innovative science projects.

Wendy recently made a scale model of the ram and also did a project on aging deer jawbones. Chip has done a school project on deer antler development. Both enjoy hunting as a recreational activity.

The Stacey's hard work has paid off in more ways than one. In 1978 the family was named the Outstanding Young Farm Family, Alabama Farmers Federation State Winners, Beef Division. Since becoming certified as a TREASURE Forest in 1981, the forestry operations have been recognized as well. The Staceys received the Helene Mosley Memorial TREASURE Forest District and State Award in 1993. Their award plaques and commemorative W. Kelly Mosley environmental print hang proudly in the comfortable home.

While the accolades are nice rewards for the family's hard work, the recognition is just icing on the cake for doing something they love. The farm is the foundation of their family life, and the Staceys are dedicated to working together and improving their TREASURE Forest. ♣



The ram is an economical way to pump water.

# Preplanning a Multiple Use Forest Timber Sale

by DOUG LINK, Landowner Assistance Program, Alabama River Woodlands

**M**any landowners manage their forest holdings for a variety of uses. These include aesthetics, game and non-game wildlife, outdoor recreation and environmental concerns, as well as traditional timber production. When faced with a timber harvest, however, they often become alarmed when considering the impact of the timber sale on other forest values. This is because most people place a great emphasis on these other amenities of the total forest resource.

Early in my career as a forest manager for a paper company, I began to take added steps in timber sale layout and other forest practices to ensure more environmentally sound results. I tried to make them more visually pleasing for my own satisfaction, as well as to make them more palatable to a general viewing public. In other words, I not only wanted the practice to work functionally, but look good at the same time. In the early 1970s I attended a workshop entitled "Forest Landscape Management." This program was an outgrowth of activities of environmental concern of what we now call the "Environmental Sixties." Techniques I had been using at the time were reinforced by knowledge gained from workshop participation and led me later to other related activities.

Following the so-called environmental outcries of the 1960s, most forest industries adopted minimum standard guidelines for landscaping their forest holdings, with most emphasis placed on timber harvest areas. These generally consisted of roadside screens of trees or "buffer strips," with some additional concern given to streamside areas. They were generally set-in-stone minimum guidelines containing set widths or depths in feet for buffer strips and provided little room or incentive for individual landscape creativity by the forest practitioner. Only minimum thought was given to wildlife needs

or activities. The screens or buffers were generally to "hide" the activity from view. Little thought was given to actually promoting the sound silvicultural activities taking place by making them more visually presentable to an ever enlarging public eye.



*A mixed forest provides a good habitat for wildlife.*

Best Management Practices, or BMPs, would begin to develop later and created a new list of concerns and management strategies for forest managers. Increasing pressures for quality hunting, fishing and other recreational use activities have also become of utmost importance to landowners and land users alike. All of these activities should be taken into consideration when planning a modern timber sale. Steps taken today will have a lasting effect on landowners' and their families' future use and enjoyment of the property, as well as possibly altering future income from not only timber products, but recreational user fees as well.

## Before the Harvest

There are a number of recommendations I would make to any landowner prior to timber sale preparation and the actual execution of the sale itself. Without considering these, the sale could quite possibly become a complete disaster, or

should be put on hold until a later time.

The first is to make use of the services of a registered forester. This person can be an Extension, Alabama Forestry Commission, other governmental agency, private consulting, or forest industry landowner assistance forester. He or she can assist you in setting up the timber sale and walk you through the whole process. If the person contacted feels they do not have all the expertise necessary, they will usually direct you to a forester more qualified in this regard. There should definitely be a free, unreserved exchange of ideas between the forester and the forest owner in developing the timber sale plan

to meet the owner's desired objectives. The objectives should be both obtainable and practical.

Second, a timber sale contract signed by the owner and purchaser-contractor should be a must. Whether the timber is to be sold on a lump sum basis or on a price per unit, "pay as cut," basis. The



Doug Link

*As part of the preplanning process, a survey of the property should be made. A registered forester can assist the landowner to develop a timber sale plan.*

contract should include all the do's and don'ts desired by the seller to spell out all that is expected from the performance by the contractor. The contract should, if the pay as cut method is chosen, include a schedule of pricing for each product to be harvested. This should also include product size specifications, if applicable, with weight factors per unit such as per cord, per thousand board feet, etc., or price per ton. The contract should also specify that the logging contractor is able to show proof of adequate insurance and all liabilities should be spelled out. A performance bond is often desirable to cover losses or damages due to poor workmanship or failure to comply with specific stated procedures.

Third, special emphasis should be given to matching logging equipment to the type of timber to be cut, terrain, environmentally sensitive areas, season of the year, and species, volumes and sizes of timber to be removed. The forester will normally be knowledgeable of the performance reputation of local contractors, their equipment

capabilities and availability.

A desired option for preplanning a timber sale is a management plan with forest type maps, timber volumes and a detailed scheduling of forest activities. Usually this is not a reality, and the person preparing for the timber sale should perform a cruise and prepare a management plan at

the time, if practical. With or without a plan, a reconnaissance of the property or general sale area should be made. The forest owner should have knowledge of the area and be able to communicate to the forester the criteria for the final expected results and goals of the proposed sale. When all sale preparation is finalized, the forest owner must realize that the amount of timber to be removed must be economically feasible for logging by the contractor. Otherwise some sacrifice in pricing may be necessary to accomplish desired goals, or slight alterations of the plan must be made to reach acceptable objectives.

## **FIELD PROCEDURES FOR SETTING UP THE SALE**

### **Special Considerations**

Locations containing artifacts or antiquities should be evaluated for saving or set aside. They may seem insignificant to many, but may be of great sentimental or historic value to the landowners, their

families or the local community as a whole. Specific locations within the forest area or even individual trees may have significant sentimental value to an individual, bringing back fond memories of the past. Once destroyed, these priceless relics cannot be replaced and should be properly identified before the timber sale.

### **Aesthetics**

Timber sale areas can be made more visually pleasing. Clearcut areas should be irregular in shape to fit the normal curvilinear contours of the terrain. This will also give smaller clearcuts the appearance of natural woods openings. Also eliminated are the long monotonous, square or straight line walls of the edge of many clearcuts. The narrower the clearcut, the more beneficial to wildlife. Look for species change or groupings of trees to help break the monotony of this wall along the margins of the clearcut. You may actually flag or paint out the boundary of the sale around these groupings or areas of species change to accent the clearcut edge. Small groupings or clumps of trees, many times of like species, may be left as small islands of trees within the clearcut to accent and enhance the overall view. In the case of mast producing hardwoods, they will benefit wildlife as well.

Select cuts, thinning or improvement cuts are often made in timber stands of mixed species composition, heavier to either pine or hardwood species. There is nothing wrong with managing mixed stands of quality pine and hardwood. Recent gains in hardwood stumpage values have made this very evident. The mixed nature of the residual stand can have a very pleasing appearance when the highest quality specimens are retained.

Most recently I have begun to mark the leave trees in this type of situation. By marking a paint band around the trees to save, they are visible from any angle from the cage of modern logging equipment. All unmarked trees are then removed.

Many forest owners place great value on the retention of flowering trees, plants, and shrubs, unique species, or trees or forest areas of significant natural beauty. Flowering trees and shrubs that come to mind are dogwood, redbud, silverbell, fringe tree, flame azaleas, mountain laurel and oakleaf hydrangea. Other species of landscape value are Southern magnolia, bays, hollies, and the evergreen oaks. Bald



cypress, cucumber magnolia, Eastern red-cedar and hemlock (north Alabama) would be unique species. Fern beds, pitcher plant flats and extensive or unusual wildflower areas should also be considered.

Fall coloration can also be considered in the overall harvest plans. The burnt gold of hickories; the yellow spires of yellow poplar; the reds of dogwood, sourwood, and the oaks; the purple and burgundy of the gums; the bright yellow to gold and red of Southern sugar maple (Florida maple) can be counted on for their annual display. Set asides can be made for these special considerations by first identifying the individual trees or areas to be saved on the ground and using a marking system to exclude them from the sale.

---

### Environmental Concerns

All timber sale plans should include provisions for protecting water quality. Best Management Practices should be strictly followed in the manner best suited for the particular sale area involved. These are minimum standard guidelines as far as streamside areas are concerned. It is often desirable to far exceed these guidelines for some owners or particular situations. Entire stream bottoms may be excluded from the sale due to their value for aesthetic reasons, wildlife, age of the timber or as special watershed cover. All roads and stream crossings should be properly constructed, reworked and stabilized following timber harvest, which may include seeding and spreading hay mulch in critical areas.

---

### Wildlife

Biodiversity is a catch word these days and is a very important term in relation to wildlife. Wildlife—game and non-game species—depends on various habitat situations for maintaining their particular species. A forest of mixed species of trees, plants and shrubs provides the habitat for a greater variety of wildlife. This is not necessarily accomplished as a homogeneous mix of plant species but can be a diversity of size and age classes of single or associated species. An example would be a mixed area of different age classes of the pine species, upland hardwood areas, bottomland hardwood, abandoned fields, beaver ponds, brush areas and areas in cultivation. All support wildlife species adapted to that particular habitat type or

the transitional area between vegetative types. For those owners with wildlife as one of the major reasons for actually owning the land, the survey of the property should identify and evaluate timber types to be retained and excluded from the sale or modified by the timber harvest itself. Always keep in mind that the harvest plans can be directed toward improving overall wildlife potential and the harvest in itself can be the prime method of wildlife habitat improvement.

Prime game food plot locations should be determined prior to the actual sale layout and be included as part of the overall plan. These permanent woods openings should be accessible for cultivation, hunter access and quite possibly for large mobile contract lime and fertilizer spread-

accomplished. All of the considerations mentioned in preceding paragraphs should have been carefully determined and preliminary flagging or identification of components of the sale made on the ground. Tree marking paint is probably the best to use for permanently identifying sale boundaries, trees to save or cut, etc. The paint will outlast the sale time period limit but will fade within a few years.

All restrictions, special considerations and penalty clauses should be a part of the timber sale contract do's and don'ts mentioned previously. A legal description of the property, and a well defined timber sale map showing actual sale areas, leave or save areas, points or locations for special consideration, haul roads, and tract



*Location of food plots should be taken into consideration when planning a timber sale.*

ers. A soil test is advised for best game food crop results. Openings should be located next to streamside zones or other travel corridors with adjacent low entrance or escape cover in the form of thickets, hedgerows, etc.

---

### Final Sale Layout

Once the final reconnaissance of the sale has been made and the landowner and forester have collectively reached the decisions to implement the sale, the actual marking out of sale boundaries and/or marking of the timber itself should be

boundaries should be a part of the actual timber sale contract. Diligent monitoring of the future active timber sale should be carried out on a scheduled basis.

It sometimes takes a forester with special knack to produce the desired results of a modern multiple use forest timber sale. The forest community today is faced with increasing pressure on the total forest resource. Those foresters and conscientious logging contractors able to meet the needs and requirements of today's forest management activities will be much in demand in forestry's future. ♣

# BETWEEN ROME & DIXIE

An integral part of one of the nation's very best natural resource education facilities is situated in and around the two small, fading south Alabama communities of Rome and Dixie. The Solon Dixon Forestry Education Center consists of 5,350 acres of farm and forestland. Since its inception in 1980, the Dixon Center has been recognized as an almost perfect blend of forest resources and educational facilities, rich in natural and cultural history. The Center and its extensive and varied research and educational

activities were made possible by the generosity of Solon Dixon, his wife Martha, and sister-in-law Thelma Dixon in 1979.

The Dixon family was among the first to homestead in the Covington-Escambia-Conecuh County area and settled near the site of the Center's campus in the late 18th or early 19th century. A series of ventures followed, including sawmills, turpentine stills, grist mills, farms, and orchards. Like many early landowners and mill operators, the Dixons even operated a "company store" that dealt in "scrip" or tokens issued to the workers in the mills and turpentine woods and redeemable only in the family store. Solon and his brother Charles began to accumulate forestland in the 1920s and '30s, peaking in about 1974 with 90,000 acres feeding sawmills in Andalusia, Lockhart, and Owassa and a plywood mill



*Martha and Solon Dixon, whose vision and support made the Dixon Center possible.*

in Andalusia. Much of the family's history is recounted in Solon Dixon's 1984 book, *The Dixon Legend*, available at the Center.

The family's interest and support of forestry and natural resources in the state and region is evidenced by their early activities and contributions toward the formation of the Alabama Forestry Association and the current building it now occupies. Later contributions by family members have been in support of the excellent forestry technician program at Lurleen B. Wallace State Junior College, scholarships for forestry students at Auburn, and financial support for the impressive Continuing Education Center on the Auburn Campus. Still, the crown jewel of the family's legacy to the forestry community has to be the Dixon Center.

The Center's 4,900 acres of forests are amazingly diverse, containing native stands of loblolly, longleaf, slash, shortleaf and spruce pine, upland hickory-oak-beech-magnolia stands, river and creek bottom hardwoods, cypress-tupelo wetlands, and many combinations of pines and hardwoods. To date, nine state champion trees have been located inside the Center's boundaries. A champion tree is the largest of its species that has been located in the state. The property also contains a number of geological and botanical

curiosities including sinkholes, disappearing springs, caves, pitcher plants, needle palms, and trilliums. Naturally, forests so rich and diverse shelter an equally rich and diverse wildlife population. The management of the property is oriented to maintain all those resources and to enhance productivity as well as diversity on the Center's forested acreage.

---

## Use of the Center

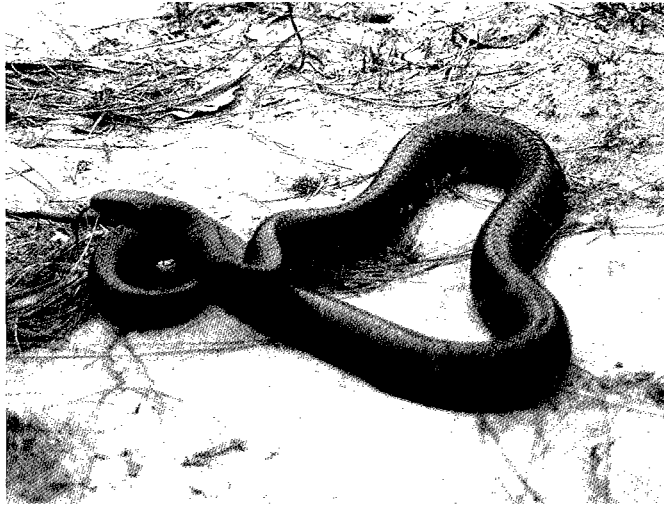
The Center's mission includes natural resource education, research, and technology transfer. All Auburn forestry students (typically between their sophomore and junior years) spend one summer quarter at the Dixon Center taking basic field forestry courses such as surveying, forest measurements, forest biology and others. This intensive practicum sets the stage for the professional coursework received on

the Auburn campus. Since 1980, more than 500 students have completed the summer course and gone on to forestry careers. Other groups make use of the Center's facilities throughout the year. A sampling from 1993 includes Troy State's Earthlab, a natural resources education experience for public school teachers, a two-week session with forestry students from Alabama A&M, several field lab sessions for Lurleen B. Wallace forestry technician students, and numerous visits from Boy Scouts, FFA groups, 4H clubs, and local school groups. State and federal natural resource agencies use the Center for in-service training for their employees.

Some users bring their own instructors and only make use of the facilities and forest, while others rely on the Dixon Center staff to provide instruction and assistance. For instance, during 1993, right-of-way purchasers employed by the Alabama State Department of Transportation completed two forestland and timber appraisal short courses organized and taught by Dixon Center personnel. Course topics include timber harvesting, prescribed fire, the use of herbicides, and wild turkey management. One- or two-day sessions provided for interested groups last year included wildflower identification, red-cockaded woodpecker biology and management, longleaf pine management, and forest wildlife management. A national program to help teachers teach about natural resources called Project Learning Tree, which is administered in the state by the Alabama Forestry Association, has made frequent use of the Center's facilities. Other university forestry programs using the Center include the University of Wisconsin, Purdue University, The University of the South, the University of Georgia, Ohio State University, Stephen F. Austin University, and Michigan State University. The forestry technician programs at both Pensacola Junior College and Lurleen B. Wallace State Junior College use the Center and its environs for field exercises and classes.

Over the past 14 years, the Center has logged an average of nearly 12 users per day for 365 days each year, totalling near-

ly 60,000 user-days over the life of the Dixon Center. This number only includes those at the Center for organized educational events. The Center is also host to many casual visitors who walk the miles of nature trails or visit other scenic and historic sites.



*The eastern indigo snake, a federally protected species, was the subject of research at the Dixon Center.*

Research at the Dixon Center has also been varied. Current active projects include mixed pine-hardwood stand regeneration and management and a neotropical migratory songbird survey. Past studies have included inquiries into grey squirrel management and biology, gopher tortoises, and indigo snakes. Research into the efficacy of and growth response to forest herbicides has been ongoing essentially since the inception of the Center. Other interests include longleaf pine regeneration and management, fire ecology, deer and turkey management, and other related topics. Cooperative research in pecan orchard management and pest control has been a fixture at the Center's orchard for several years.

The Dixon Center is unique among similar Auburn University facilities in that it is essentially self-supporting. Funds for the operation of the Center are generated through the sales of forest and farm products, farm and wildlife leases, user fees, research grants, and other miscellaneous sources. A portion of the line item appropriation from the Legislature's Special Education Trust Fund budget to the School of Forestry makes up about 24 percent of the Center's total income. The remainder of the Center's operating funds are self-generated.

In 1991 the Solon Dixon Forestry Education Center was honored as a TREASURE Forest. Although its management had reflected the multiple resource ideals of the program since its inception, public lands did not qualify for recognition in the program until that year.

### **Dedicated Staff**

Facilities at the Center include dormitories, a dining hall, classroom/auditorium, faculty cabin, shop, and residences for the director and assistant director. In 1990, construction on the Martha Dixon Administration Building was completed and offices moved to that location. The move left the historic Dixon family homeplace empty and it is slated to be converted into a family, forestry, and area museum.

Despite the death of Mr. Dixon in 1986, the Center named in his honor has continued to thrive. Rhett Johnson,

director of the Center since its founding, attributes that success to continued support by Martha Dixon and members of the Dixon family, Auburn Dean of Forestry Emmett Thompson and the Auburn faculty, and valued local support. Johnson says that one of the real strengths of the Center has been a dedicated, talented, and capable staff. Only two full-time employees have left the Center since its inception 14 years ago. Today's staff includes Johnson, Assistant Director Dale Pancake, Administrative Supervisor Teresa Cannon, Forest Technicians Pete DuBose, Luke Vincent, Davey Sightler, and David Padgett, and Pecan Orchard Manager Larry Stallings. Together they represent a total of 70 years of experience at the Center. A staff of accomplished part-time cooks round out the organization and add to its outstanding reputation for hospitality.

Steady progress has been made at the Center since it was first conceived in Mr. Dixon's imagination. Improvements in facilities, staff, and the natural resource base are evident and the outlook for future development is bright. Solon Dixon recognized the potential for this south Alabama gem early on and would surely be pleased at the TREASURE it has become. ♣

# LIVING WITH BEAVER

by NICK WALTERS, Wildlife Biologist, U.S. Department of Agriculture, Animal Damage Control

**T**he beaver story is a classic in the history of wildlife management. Although the pristine climax forests of North America apparently did not support the high beaver densities which are present today, beaver did abound throughout much of North America during presettlement times. During this period, beaver flesh was heavily utilized by the American natives as a source of food, and the hides were used to make clothing. Later, beaver hides became important items for trade with the Europeans. Due to the great importance of beaver to the American Indians, beaver populations may have been depressed by year-round hunting and trapping even before the arrival of the Europeans. Many of the first Europeans to arrive in North America came in search of beaver fur. During this time, felt hats were very popular and beaver fur was highly prized by the Europeans because it was the best source of felting material available. So highly prized, in fact, that it was used like money in the business dealings of those times. As beaver were trapped out of areas by European fur traders, they moved further and further west in search of more beaver to harvest. In this way, the European's search for beaver played a major role in the exploration and colonization of North America.

Throughout this early period, management and conservation of the beaver resource was not considered, and by the late 1800s, beaver had nearly vanished from much of North America. Fortunately, wildlife managers in the early 1900s enacted legislation and regulations to protect beaver from over harvest. Subsequent restocking and management efforts, in conjunction with habitat alterations favoring beaver, resulted in a rebound of beaver populations throughout much of their historic range. As beaver populations again reached favorable levels, harvest was resumed. This time, however, harvest was regulated so as not to deplete populations.

Today, beaver have no significant predators other than man in most areas, but until recently beaver populations have been largely held in check by sport trapping. The collapse of the fur market in the early 1980s led to beaver populations being left to grow unregulated for several years. As beaver populations expanded rapidly, they eventually reached levels where they became pests in many areas. Without a rebound in the wild fur market and resulting increases in sport trapping, these high levels will continue and management activities will have to be conducted at specific problem sites.

## Beaver in Alabama

The history of beaver in Alabama parallels the history of beaver throughout North America. By the early 1900s, the Alabama beaver population was limited to a few small colonies in the central part of the state. A reduction in harvest pressure allowed some increase in the early 1900s, but trappers quickly eliminated most of the population by the mid-1930s. In 1938, the beaver trapping season was closed. In the 1930s it was estimated that there were about 500 beaver in Alabama. By 1940, two years after the trapping season had been closed, beaver had increased to an estimated 3,500 animals, and by 1960 the population was estimated to be 75,000 to 100,000. Beaver numbers in the state are apparently still expanding; however, no estimate of the current population size is available.

## Beneficial Aspects of Beaver

Beaver are generally considered beneficial when they do not compete with humans for land, water, or timber. However, assessing the values of beaver is difficult since we do not fully understand the relationships between beaver, the environment, and other species.

When located in uplands or on the headwaters of streams, beaver dams can be highly beneficial. Beaver dams store run-off from drainage areas, gradually

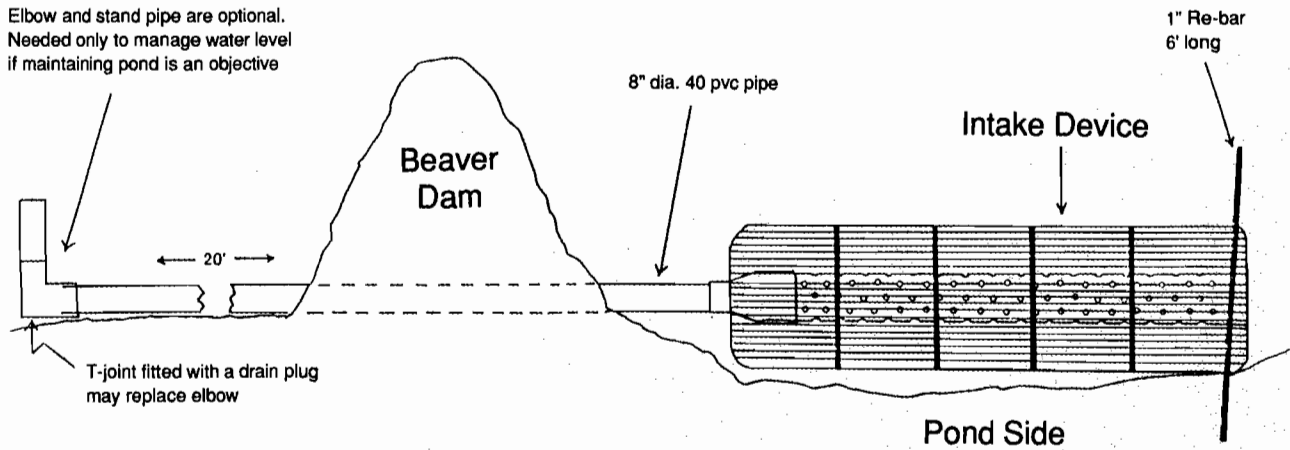
releasing water and stabilizing stream flow. Seepage of water from beaver ponds benefits nearby vegetation and contributes to the stability of water tables. Beaver impoundments can also be important sources of water for irrigation or for livestock and wildlife during droughts. Beaver dams help to reduce soil erosion, since materials suspended in running water are deposited as they flow into beaver impoundments. Old beaver impoundments which have filled in with silt produce some of the most fertile soils in existence. Beaver impoundments in upland areas, therefore, help to reduce flooding and silting in bottomland areas. The type of beaver ponds with which most people are familiar—those located in bottomland areas—are of debatable value for soil and water conservation. However, these impoundments have other important values.

Regardless of location, most beaver impoundments benefit a wide variety of other wildlife species. Beaver impoundments provide important habitat for many species of waterfowl. In particular, the wood duck, a species that was near extinction in the early 1900s, has benefited greatly from the return of the beaver. Beaver impoundments also provide favorable habitat for a variety of furbearers, such as river otters, raccoons, mink, and muskrats. Big game species like white-tailed deer benefit from the food and cover provided by beaver activity, while wild turkeys seem to be attracted to beaver swamps for roosting. A complete list of other species which benefit from beaver activity would be too lengthy for this article, but some other examples include red-headed woodpeckers, kingfishers, herons, rabbits, and a variety of reptiles, amphibians, and fishes.

Since beaver impoundments provide habitat for such a wide variety of animals, they provide people the opportunity for several types of recreation, including hunting, fishing, trapping, and bird watching. In some cases, leasing areas inhabited

**Figure 1. Clemson Beaver Pond Leveler**

Elbow and stand pipe are optional.  
Needed only to manage water level  
if maintaining pond is an objective



For more information on construction of the Clemson Beaver Pond Leveler, contact Dr. Gene W. Wood, Lehotsky Hall, Box 340362, Clemson, S.C. 29634-0362.

by beaver for hunting or fishing may generate revenue in excess of economic losses to timber and other resources. Although beaver pelts are presently of low value, the castors or scent glands are still in considerable demand. Beaver castors are used to make perfumes and animal lures and can bring good prices. Beaver meat is also excellent table fare and can be cooked in the same manner as venison.

### **Beaver Damage**

Although beaver can be highly beneficial, when colonies establish in unwanted areas or go unmanaged, they can become an extreme nuisance and frequently cause a large amount of damage. The most common and extensive type of damage caused by beaver is flooding timber. Other common types of beaver damage include flooding pasture, crop, and residential areas; feeding in crops adjacent to streams; damming culverts and bridges causing flooding and erosion of roadways or railroad beds; burrowing in pond dams, road beds, or yards; girdling and cutting ornamental or shade trees; and damage to docks and boat houses. Beaver impoundments can also increase numbers of mosquitos and poisonous snakes.

Beaver cause an estimated \$75 to \$100 million worth of damage annually throughout the United States, with estimates in the millions for some individual southeastern states. It is estimated that beaver have caused \$4 billion worth of damage in the Southeast over the past 40 years.

### **Damage Prevention and Control**

Before initiating a beaver damage control program, landowners should evaluate the advantages and disadvantages of having beaver and the costs associated with control. When the damage caused by beaver outweighs the benefits as well as the cost of controlling the damage, a control program would be warranted. Beaver problems are generally not difficult to control, and anyone with a reasonable amount of outdoor savvy can effectively control most beaver problems. The most important points to remember are that control should be initiated as soon as a problem is realized, and when control is achieved, monitoring should be continued to prevent a recurrence of the problem. Once beaver become well established, achieving control is much more difficult and costly.

When confronted with beaver problems for the first time, most people think that destroying the dams will cause the beaver to leave or otherwise solve the problem. Needless to say, even with a small colony, this seldom, if ever, works. Methods such as shooting and dynamiting lodges have also proven to be of little value for most landowners. There are, however, a number of effective methods for controlling beaver damage.

In situations where beaver damage is limited to the destruction of a small number of valuable ornamental, shade, or fruit trees, tree guards can be installed to prevent further damage. The bottom 3 feet of the tree trunk should be wrapped with

hardware cloth or other heavy wire screen, leaving a space between the screen and the trunk to prevent chewing. If trees are subject to periodic flooding, the screen should extend 2 feet above the high water level.

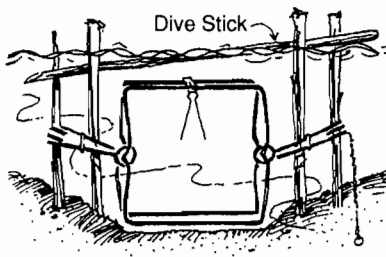
Where damage is limited to a minor amount of flooding, or colony maintenance is desirable, drain pipes installed through beaver dams can often solve the problem without removing the beaver. A variety of drainage devices have been developed for regulating water levels in beaver impoundments. One good design is the Clemson Beaver Pond Leveler (Figure 1). This device can be used as illustrated or modified slightly to reduce costs. Although these devices can be effective, they generally require at least annual maintenance and may need to be completely rebuilt periodically due to siltation and other problems.

When the above methods are not suitable, the best method of controlling beaver damage is to remove the problem beaver by trapping and restore natural drainage through dam removal. Beaver can be captured using 3 types of traps: conibear or body-gripping type traps, conventional leghold traps, and snares. Body-gripping traps are the most effective and easily used type trap in most situations. However, snares may be more effective in ponds with little bank vegetation or where beaver have experienced considerable trapping pressure in the past. Leghold traps can also be effective in some situations, but generally require more experi-

ence on the part of the user.

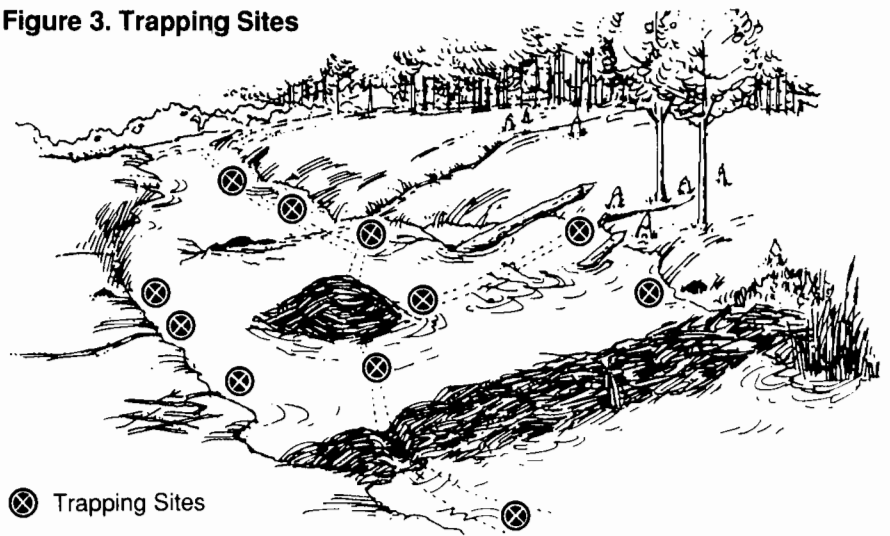
Conibear traps are highly adaptable for water sets in both shallow and deep water, either set partially above or beneath the surface (Figure 2). In most cases, beaver can be removed using 3 or 4 major types of sets (Figure 3). In all sets, some effort should be made to blend the trap with the surroundings so as to make it inconspicuous, and traps should always be securely wired to a fixed object. In dam sets, the trap is placed below the dam in the trail used by beaver to cross the dam. This trail is usually in the center of the dam and is easy to locate. Traps can also be set at places where beaver crawl out of the water to deposit scent or feed. Good castor-based beaver lure used at this type of

**Figure 2. Conibear Trap**



set can greatly increase the chances of making a catch. Trails through vegetation or deep-water runs also make productive sets. Any narrow spot along a trail where beaver can be directed through a trap will work, but it is usually best to set the trap where beaver dive under a log. Traps can also be set at the entrances of lodges or bank dens, but this should usually be used only as a last resort since it may cause beaver to become trap shy.

**Figure 3. Trapping Sites**



Snares can be used in the same situations as conibears and may be more effective in situations where it is difficult to conceal a conibear. Snares should be fastened securely to a large tree at ground level or securely staked using a 2 foot iron or wooden stake. If wooden stakes are used, care must be taken to drive them completely below the surface so the beaver cannot chew them off.

While beaver control is not extremely difficult, many landowners desire or require assistance with conducting actual control work. In many areas, private trappers are available to assist with trapping under a fee for service or other arrangement. Technical advice is available from the Alabama Division of Game and Fish, Alabama Cooperative Extension Service and the U.S. Department of Agriculture's Animal Damage Control Program. The Animal Damage Control program, head-

quartered at Auburn University, is available for assistance with beaver and other wildlife damage problems in the state. The program is conducted in cooperation with the Alabama Game and Fish Division and other state agencies.

**Additional Information**

For more information on beaver or beaver damage control contact:

- USDA Animal Damage Control  
Extension Hall, Room 118  
Auburn University, Alabama 36849  
(205) 844-5670
- Alabama Division of Game and Fish  
64 North Union  
Montgomery, AL 36130  
(205) 242-3465

**References**

- Lewis, J.W., Jr. "Significance of beaver and beaver ponds in the Tombigbee Resource Conservation and Development Area Alabama-1978." Circ. CRD-7, Ala. Coop. Ext. Serv., Auburn Univ., 1979.
- Timm, R.M. "Prevention and Control of Wildlife Damage." Lincoln: Great Plains Agric. Council and Nebraska Coop. Ext. Serv., 1983.
- Novak, M., J.A. Baker, M.E. Obbard, and B. Malloch. **Wild Furbearer Management and Conservation in North America.** Ontario: Ontario Trappers Association, 1987.
- Wilkinson, P.M. "A life history study of the beaver in east-central Alabama." M.S. Thesis, Auburn Univ., 1962. ♀

**Is Your Mailing Label Correct?**

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

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

**New Address**

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

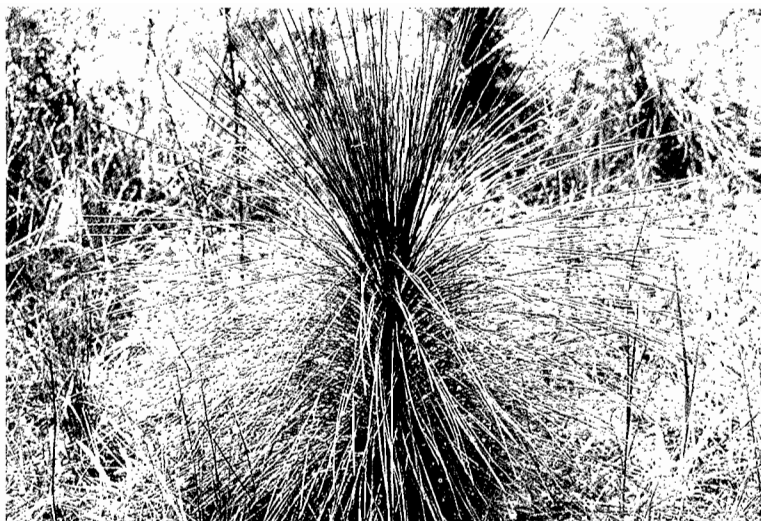
**Old Address as it appears on mailing label**

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

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

# LONGLEAF PINE AS A PLANTING OPTION: AN ANALYSIS

by MARSHALL THOMAS, President,  
F&W Forestry Services, Inc., Albany, Georgia



**L**ongleaf pine was once a major species of the Southern forest, stretching from Virginia to Texas and occupying as much as 60 million acres. Today, longleaf occupies only 1 to 2 million acres.

Longleaf began its decline around the turn of the century, falling victim to harvesting without artificial regeneration and suppression of fire in the Southern forest. Longleaf relies on fire to perpetuate itself naturally.

The difficulties of planting longleaf led to the selection of slash and loblolly as the preferred species for planting in the 1960s-1980s. However, we can now plant longleaf successfully, and many timberland owners are taking another look at its positive characteristics, among them the aesthetically pleasing appearance of older longleaf stands when grown on long rotations.

Landowners who believe demand for solid wood products will increase as supplies decline have another reason to look at longleaf, which produces a high grade of lumber and high average production rates over long rotations. Landowners with a primary interest in pine straw production may also be interested in longleaf for the high quality straw that can be harvested at regular intervals. I believe, however, that the better choice for straw is slash. Harvests from this species can begin at seven years, much earlier than longleaf, and the straw yield over time will be comparable.

---

## Longleaf Economics

It's easy to become interested in longleaf pine because of its appearance and the grade of lumber it produces, but it

pays to take a look at the economics of the species. F&W has conducted an analysis of 60-year longleaf pine rotations in comparison with three, back-to-back 19-year slash rotations and obtained some interesting results. Slash was chosen because of its comparability with longleaf in pine straw yield over 60 years.

First, at interest rates of under 9 percent, the 60-year old longleaf pine rotation actually yields a higher net present value than the three slash rotations, with net present values ranging from near \$2,500 at 7 percent to around \$700 at 9 percent. Above 9 percent, the short slash rotation yields a higher net present value.

The interest rate earned on the investment in both species ranges from 11 to 12 percent, with no real difference between the two. If using this as the decision criteria for making an investment, it doesn't matter which species or rotation length you choose.

---

## Long Rotation Forestry

The major difference between three 19-year-old slash rotations and a single 60-year longleaf rotation shows up in a discounted payback period analysis. The discounted payback period is the number of years it takes for the discounted net cash flows from the forest to equal the original investment. At a 7 percent discount rate, the investment will be returned in 20 years from slash compared to 35 years for longleaf. The difference increases when a 9 percent discount rate is used. Slash still pays back in 20 years compared to 50 years for longleaf. This is typical of long rotation forestry and is not really a result of planting slash or longleaf

pine. Simply put, the longer you put off your final harvest, the longer it takes to get your money back.

Longleaf pine shines from the viewpoint of annualized income, which is the total income produced over the period divided by the number of years in the period. The three 19-year-old slash rotations yield approximately \$84 per acre per year in annualized income. Longleaf yields approximately \$130 per acre per year. However, most of the income is received late in the rotation.

Our analysis did not show that premiums from the recreation potential or land sale prices of longleaf plantations significantly altered the numbers over the 60-year rotation. If you have an existing longleaf stand, however, you should take these factors into account.

---

## A Viable Option for Some

What kind of landowner will invest in longleaf pine? Probably one with a long-term outlook; one with sufficient capital to make a long-term investment and not be required to cut the stand early; one who believes that solid wood products will become increasingly valuable over time (none of the above analyses included price appreciation for sawtimber versus pulpwood); and—in all likelihood—one who has a special interest in enhancing the aesthetic values of the forest.

From a financial viewpoint, longleaf pine offers favorable results in all criteria except the discounted payback and the length of time to recoup the initial investment. For someone with a long-term planning horizon and capital to invest and leave in place, long rotation longleaf represents a viable planting option. ♣

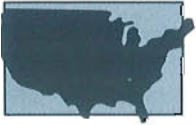
# LANDOWNERS



## LEGISLATIVE • ALERT

### NATIONAL

by TERRI BATES, Washington Representative, National Association of State Foresters



**C**ongress returned January 25 to face tough budget cuts and a slew of legislation awaiting reauthorization in 1994. With fall elections already looming ahead, which programs will or won't be cut will dominate Congress for a significant part of the year. Upcoming elections, tempered by a growing backlash against environmental laws, will also detract from Congress' desire to act on other legislation. This includes the Clean Water and Endangered Species Acts, USDA reorganization, and Environmental Protection Agency cabinet status, as constituents increasingly raise questions about the costs of these laws and their effect on private property owners.

#### Budget Proposals

With Congress' return, the first order of business was the submission of President Clinton's budget proposal for fiscal year 1995. Last year's deficit reduction package tightened spending caps for the next five years, without an inflation factor to ease the pain. Most federal agencies will see sizable cuts in their budgets for the coming year that will impact their programs and personnel.

With a few exceptions, federally funded forestry programs were not exempt. The Forest Stewardship Incentives Program, which provides technical and cost-share assistance to private landowners for comprehensive forest management plans, received modest increases from the president. However, significant reductions were proposed for the Forestry Incentives and Agricultural Conservation Programs, which provide cost-share assistance for tree planting and timber stand improvement activities. U.S. Forest Service programs that provide assistance for fire pro-

tection and insect and disease suppression on private lands were also hard hit. A U.S. Small Business Administration program that provides grants to states for tree planting on state and local government lands has been proposed for complete elimination. The SBA program has provided grant money for the last four years to generate matching funds from states and localities and has succeeded in planting a high number of trees, mainly in urban and community settings.

Reorganization of the U.S. Department of Agriculture, the Clean Water Act, and hearings leading up to the 1995 Farm Bill will share the spotlight from Congress this year on the conservation front. Both Congress and the administration have taken a keen interest in reorganizing the Agriculture Department, which includes the U.S. Forest Service and Soil Conservation Service. The Administration has proposed closing 1,200 field offices and consolidating several agencies. The Agricultural Stabilization and Conservation Service and the Farmers Home Administration would be consolidated into a Farm Services Administration, and a Natural Resource Conservation Service would be created in place of the Soil Conservation Service for the purpose of elevating the conservation mission at the department. Congress has begun reviewing this proposal and has taken tentative steps towards its approval. However, "Kika" de la Garza (D-TX), chairman of the House Agriculture Committee, wants assurances from the administration that other federal departments will also streamline their operations.

#### Forestry Related Legislation

After several years of discussion, the Senate has begun action on a new Clean Water Act. Issues that will potentially impact forestry activities are non-point

source pollution prevention and wetland protection measures. Where forestry activities are concerned, the principle Senate bill (S. 1114) departs from the current approach to non-point source pollution which has allowed state discretion on how to address major non-point source problems. In Alabama this has meant that prevention is emphasized by encouraging landowners to voluntarily use forestry Best Management Practices developed by the Alabama Forestry Commission. The Senate bill, however, includes provisions that define forest harvesting and road construction as new sources of non-point source pollution and would require all landowners to ensure management measures (Best Management Practices) were implemented wherever these activities occurred. "New source" also applies to commercial development and highway construction. Agricultural activities, however, would be defined as existing sources of non-point source pollution; site-specific plans would be required only in watersheds where water quality impairments have been identified as a result of agricultural activities.

S. 1114 would adopt into law many of the Clinton administration's wetlands policy recommendations announced last summer. These include the adoption of uniform wetland delineation criteria by all federal agencies and exemptions from federal regulation for all wetlands that were cropped prior to 1985, but no longer exhibit wetland characteristics. Current provisions which exempt "normal" and "ongoing" forestry activities in a wetland would continue to be exempt in the Senate bill and the plethora of individual wetland bills that have been sponsored in the House. To date a comprehensive Clean Water Bill has not been introduced in the House. Still, what constitutes "normal" and "ongoing"



silvicultural activities is being challenged in other forums. At the instigation of environmental groups, the White House is currently reviewing whether pine plantations in wetland areas meets this criteria. Also likely to influence the administration's policy in this area is the final outcome of a federal court case in North Carolina involving the timber giant Weyerhaeuser Company in the same issues.

The bets are that reauthorization of the Endangered Species Act will again be put off for another year, although the Congressional authorizing committees may get so far as marking up legislation. A range of bills have been introduced, including a bill by Senator Richard Shelby, S. 1521, which would make it more difficult to list species while requiring federal

payments to landowners who suffer loss of economic value due to listing.

The Clinton administration does not appear anxious to see an Endangered Species Reauthorization bill move forward now. Seeking time to demonstrate to landowners the flexibility in the current law, the administration has trumpeted agreements with timber companies in the South (North Carolina) and Northwest outlining habitat conservation plans that aim to preserve species while allowing logging to proceed. Last December the administration said it would propose regulations aimed at easing restrictions on state and private timberland in spotted owl habitat in the Northwest.

In anticipation of the 1995 Farm Bill, the Administration is conducting field vis-


its and plans hearings on the results of implementing conservation provisions of the 1990 Farm Bill.

## Forest Service Has New Leadership

Finally, the new chief of the U.S. Forest Service, Jack Ward Thomas, has set his direction for the future of the agency and the "messages" he wishes to emphasize. In a December 9 memo to agency employees, Thomas stated the messages he will use to communicate the direction of the agency: obey the law, tell the truth, implement ecosystem management, develop new knowledge, synthesize research and apply it to the management of natural resources, and build a Forest Service organization for the 21st century. ♣

## ALABAMA

by FRANK SEGO, Legislative Liaison, Alabama Forestry Commission



**T**he 1994 Legislature—an election year session. It's that mystical, magical time that unfolds every four years to strike fear in the hearts of many incumbents bent on reelection.

But 1994 is no ordinary election year. When the June 7 primary rolls around, candidates will find themselves in some heretofore unfamiliar voting places. The reason: In 1993 the courts accepted the Reed-Buskey Plan, which carves up the current districts, making way for the certainty of additional blacks in the House and Senate.

For example, the Reed-Buskey House Plan creates eight new black House districts for a total of 27 majority black districts out of the 105 total House membership.

Meanwhile, the Reed-Buskey Senate Plan gives rise to three new black Senate districts for a total of eight majority black Senate seats in the 35-member body. The Senate plan splits 26 counties, while the House plan splits 37 counties.

The new reapportionment plan will have a dramatic effect on such veteran legislators as Rep. G.J. "Dutch" Higginbotham of Lee County, a four-term member of the House and current chairman of the powerful Judiciary Committee. Higginbotham has declared that he will run for the State Board of Education.

Other members of the House and Senate will be placed in districts where they will go head-to-head with old friends, with whom they have served during the past several terms.

Whatever the outcome, the next regular session of the legislature—which convenes in April of 1995—will feature a contingent of newcomers that could change the face of the state's political structure for years to come.

### Regulatory Impact Act

Aside from Education Reform, one of the most talked about measures to come before the regular session was the proposed Regulatory Impact Act of 1994. The bill was carefully crafted after intensive research by Stewards of Family Farms, Ranches and Forests, the volunteer organization headed by former State Forester Bill Moody. It provides a method to ensure that the impact of regulatory laws and governmental regulations on the value of real property be fairly taken into account.

Such Alabama law would implement the guarantee in the United States Constitution pertaining to the right of citizens to own property and their right to due process and just compensation where property rights and values are taken by the government.

The bill further provides for inverse condemnation civil actions as an additional method of relief for owners of real property when the value of same is dimin-

ished by such governmental regulations.

It would require that the state and its agencies, as well as municipalities and counties, develop certain guidelines for a statute of limitations for inverse condemnation actions and provides for appropriate adjustments to appraised values for ad valorem purposes.

### Hearing Attracts Masses

In a lengthy February public hearing before the Senate Committee on Agriculture, Conservation and Forestry, Moody clearly stated that it is the option of the landowner to receive either monetary damages equal to the amount of the diminished property value or, if the loss is greater than 50 percent, receive the entire fair market value of the property prior to governmental action.

The bill (S-349) was sponsored by Sen. W.H. "Pat" Lindsey of Butler. The House companion (H-413) was handled by Rep. Richard Lindsey of Centre. It carries the solid support of the Alabama Forestry Association, Alabama Farmers Federation and the Alabama Cattlemen's Association.

The February public hearing drew hundreds of citizens from across the state, who packed the Joint Briefing Room at the State House, spilling over into the eighth floor hallways.

Further action on the Senate bill was pending this as Legislative Alert went to press in early March. ♣

# A Historical View of Cost-Share Tree Planting

by TIM GOTHARD, Cost-Share Specialist, Alabama Forestry Commission

Surprisingly to some, federal tree planting assistance has been around for well over 50 years and has contributed significantly to the tree planting accomplishments of both our state and nation. Over these years, five federal and one state program have been offered in Alabama to foster tree planting on private lands; most of these are still in existence.

## Incentive Programs and Their Objectives

As we know them today, full-fledged federal tree planting incentives began with the inception of the present day Agricultural Conservation Program (ACP) in 1936. The ACP was later joined by the Soil Bank (SB), which ran from 1956-62. Other programs followed; the Forestry Incentives Program (FIP) and Conservation Reserve Program (CRP), presently active but with uncertain futures, began in 1974 and 1985 respectively. The new kid on the block is the Stewardship Incentives Program (SIP), which began only two years ago. In addition to these federal programs, Alabama also has a state funded incentive program administered by the Alabama Agricultural Conservation Development Commission (AACDCP) which began in 1985.

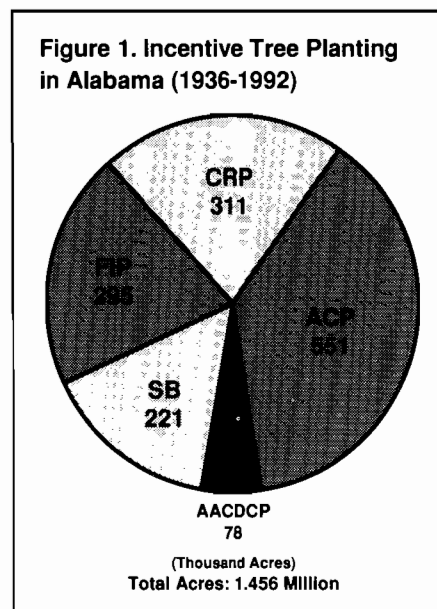
All six programs offer cost-sharing incentives but differ somewhat in their tree planting goals. Afforestation under the CRP and SB was geared to curb agricultural commodity production through retirement of marginal croplands, particularly that acreage considered highly erodible. The ACP and AACDCP share the goal of reducing erosion losses through afforestation of openland, while also sharing the goal of FIP, which is increasing forest productivity on private lands to enhance the nation's timber supply. The SIP meshes the goals of all the previous programs and further expands by seeking to enhance all forest related resources.

With the bulk of SIP's first fruits being realized through tree plantings that took place this past planting season (Decem-

ber-March), I became curious about the actual magnitude of cost-share tree planting since the incentive approach to afforestation and reforestation of private lands began in 1936. Likewise, I was curious about how frequently these plantings were discarded after the maintenance contracts expired, and even more so, what the condition is of stands which remain. Let's take a look at what I found.

## National and State Level

From 1936-92 federal incentive planting has been performed on approximately 14.7 million acres across the nation. The largest portion of that acreage has been planted under the ACP program (7.2 million) due to its long existence. The FIP, CRP, and SB have each resulted in planted acres in excess of 2 million and combined account for roughly 7.5 million acres.



In Alabama, approximately 1.456 million acres have been planted to forest trees under the incentive programs (see Figure 1). The ACP leads the way with 551,000 acres planted to trees since its inception. The CRP, FIP, and SB round out the federal incentive plantings with a

combined total of 827,000 acres and an additional 78,000 acres has been accomplished under the state AACDCP over the last eight years.

How does Alabama stack up to the rest of the nation in incentive planting accomplishments? Quite well indeed; Alabama places in the top four for acres planted under each of the federal tree planting programs (second in the nation under the FIP, third under the CRP and SB, and fourth under the ACP). Not a bad resume for forest regeneration and forest landowners in Alabama, but what about retention and management?

## Retention and Management

"Will landowners retain their acres planted to trees after their contracts run out?" This question has been raised innumerable times since the inception of CRP in 1985. Many have questioned the ability of such a program to retire cropland for the long-term. The SB was very similar to the CRP and offers some insight into the likelihood that CRP tree plantings will or will not be maintained after their 10-year contracts expire.

Based on a 1990-91 examination of incentive tree plantings following expiration of their maintenance contracts, it was found that 80 percent of SB sites were still in forest (35 percent in the original plantings; the remainder harvested and subsequent forest stands established). Thirteen of the remaining 20 percent had been lost to urban development and only 7 percent had been converted back to cropland or pasture. Tree planting was considered an effective method of meeting the SB objective of retiring cropland acreage and may be an indication of the pending fate of CRP tree plantings following contract expiration. Further results of the study (Figure 2) reveal a similar pattern for plantings under other programs; the large majority of incentive plantings are retained for long-term timber use.

Active management in the years fol-  
(Continued on page 20)

---

# TODAY'S LOGGER: READY FOR THE 21ST CENTURY?

---

**L**ong gone are the days described below, but this nameless logger's description helps to remind today's logger of where he has been and to prepare him for the next century of logging.

*At 4 in the morning the iron-headed old boss would stick his mug in the bunk house door and yell "Day light in the swamp" and out we all rolled. At 6:00 that same boss would yell "All out for the woods." By daylight we would be logging in the swamp. Along about noon the cook would show up with a flat log drawn by a horse with our pork and beans. At 4:00 which was about dark in the winter the boss would yell "All in." Well when we got back to camp at about 5 o'clock, as we had 2 or 3 miles to walk we would wash up and get into the grub house at 6. After grub was over we would go back in the bunk house and thaw out our boots. Some would play cards, checkers and swap lies until the boss came in and yelled "lights out" at 9 o'clock.<sup>1</sup>*

Is that the image you have of a logger's life? Well, perhaps generations ago, but times have changed. Today's logger is a mechanic, a machine operator and a businessman. As the backbone of a \$9 billion-a-year forest industry, Alabama's 2,500 or so loggers contribute significantly to the state's economy. Even though modern loggers are far removed from this earlier image, they still maintain some ties to the loggers of the last century.

As lumber publication executive George Cornwall said in 1932,

*"The logger is a natural born engineer, resourceful and patient. He likes new ideas but is not overly prone to adopt new methods until they have been tested by actual performance. If equipment breaks down he calls to his assistance the shop mechanic, and will struggle along until he gets the machine going again. Hours mean nothing to a logger while repairing a breakdown. It is all in the day's work, and the logs must be kept moving to the sawmill."<sup>2</sup>*

True in the thirties, it's perhaps even more valid today. Today's typical logger will own between \$500,000 and \$1 million worth of equipment, field 10 to 20 man crews and track their operations through extensive computer systems. A logger's life is complicated by difficult-to-understand environmental and Department of Transportation regulations, Occupational Safety and Health Administration requirements, and, of course, increasingly complex tax laws.

The development of intricate machinery which must be able to operate under harsh conditions has been a costly replacement for the chainsaw. In Alabama's woods, most of the timber is cut, not by men with chainsaws, but by large machinery, increasing production and improving safety. Machines, called feller-bunchers, capable of shearing large trees off at ground level, are costly, in excess of \$145,000. Other types of machines used in the woods today are skidders and loaders which move the fallen timber to a loading deck and stack it on the truck. These machines, costing between \$80-120,000 face rough operating conditions and must be maintained if they are to perform the

difficult jobs for which they are designed. Adding fuel, insurance, salaries and other business costs means the logger is truly running a million-dollar-a-year business.

Trucks driven by loggers must be kept in top shape as well. Because they travel "on-road" when hauling wood to the mills, these trucks must meet all of the stringent standards required for any other commercial truck. To keep pace, the logger must attend numerous seminars and training courses.

A logger's primary concern is his men's safety. The Occupational Safety and Health Administration sets up many rules to help keep workers safe. These are constantly changing and force loggers to devote many hours learning and implementing on-the-job rules. Failure to do so may result in large fines and possible crew injuries. Thus, even though it requires additional time away from the business of logging, it is a constant necessity.

Environmental protection is another major concern of the nineties logger. No longer can the "cut and run" attitude of earlier times be tolerated. Loggers are strong supporters of the environmental movement. They all love the land and understand the need to care for it. Best Management Practices, while written primarily by foresters, must often be implemented by the loggers. However, this leads to still more classes and less time in the woods. Furthermore, it often results in more expensive ways of harvesting timber.

---

## Loggers Council Formed

Obviously, today's loggers are professionals. They must follow many laws and regulations subject to constant revision. Keeping up demands a considerable amount of the logger's time. Therefore, in addition to being in the woods from daylight till dark (often six days a week), the logger has to find time to learn about important changes which greatly impact his business.

*(Continued on page 20)*

A newly formed organization designed to help loggers throughout the state implement these changes is the Alabama Loggers Council. The Council, affiliated with the Alabama Forestry Association, helps forest industry and loggers work together. All loggers in Alabama are invited to join. The Council is organized into 10 geographic districts with an elected logger representing each district on an Executive Committee. This Committee, headed by Joe Watford of Abbeville, sets the agenda and goals for the Loggers Council.

Barely a year old, the Council already has many accomplishments to its credit. Creating a stronger bond between loggers and forest industry has helped improve the working relationship between the two groups by opening new lines of communication. Each district representative holds at least one meeting a year to address safety, insurance and other logging concerns. The goal is to have quarterly logger meetings in each district.

Improvements in safety records and increased compliance with Alabama's BMPs are two of the ALC's major goals for the immediate future. Working with forest industry, the Council is offering 10 safety training programs throughout the state. These are seminars designed to increase safety awareness among the logging contractors and their crews. Patterned after a highly successful program in Mississippi, the ALC has already trained over 550 loggers in three sessions. The Council has also worked with the Alabama Forestry Commission and other groups to present programs aimed

at helping loggers, landowners and other resource professionals to better follow Alabama's Best Management Practices.

Another project of the ALC is recognizing the "Alabama Logger of the Year." In the past this has been done primarily by the AFA Safety Committee. However, since the ALC is now strong representation for loggers in Alabama, the Executive Committee felt it would be



*Log-a-Load for Kids Chairman Ray Clark and Matthew Hawsey, a patient at Children's Hospital, survey a model log truck.*

more meaningful for the award to come from fellow loggers. This year the committee chose Billy John and Jimmy Hudspeth of Abbeville to be the 1993 Logger of the Year. The Hudspeths' safety record helped make them the unanimous choice for this honor. Members of the ALC who visited the Hudspeth crew were excited to have such a well qualified candidate representing loggers in Alabama.

Another important project of the ALC

has been the Log-a-Load for Kids Campaign. Benefiting the Children's Hospitals of Alabama, this project was led by ALC Executive Committee member Ray Clark who says, "While trees may be our most renewable resource, kids are our most precious." This sums up the feelings of the Council. Setting a goal of \$75,000 last year, the ALC and AFA raised almost \$150,000. This year, Ray's slogan is "More in '94." The Log-a-Load for Kids' goal in 1994 is \$250,000, which all members of the ALC Executive Committee are sure is possible.

Loggers claim that perhaps the greatest benefit of joining the ALC is the chance to work with other loggers throughout the state and region in order to improve working conditions in the woods. With logging being recognized as one of the most dangerous professions, the Loggers Council wants to work with all of the loggers in the state in order to make logging a safer profession. Another goal of the Council is to improve the public perception of the loggers. In turn, the ALC hopes to improve the situation which faces everyone involved with Alabama's forests.

For more information on the Loggers Council, contact the Alabama Forestry Association, 555 Alabama St., Montgomery, AL 36104; 205-265-8733.

### Footnotes

- <sup>1</sup>Darius Kinsey. "This Was Logging!" Selected photographs of Darius Kinsey. Seattle, Washington: Superior Publishing Company, 1954, page 49.  
<sup>2</sup>Kinsey, page 69. ♣

## Cost-Share Tree Planting

*Continued from page 18*

lowing contract expiration is perhaps the only area where considerable improvement is needed. Several studies have documented that over half of ACP and FIP plantations were in need of some form of silvicultural treatment in the immediate future. Of most note was the need for competition control and thinning to improve the productivity of the stand. Both of these intermediate stand treatments could be accomplished with incentive assistance through use of timber stand improvement practices available under the ACP, FIP, SIP, and AACDCP. Additionally, such practices can be con-

**Figure 2. Retention and Loss of Incentive Tree Planting Sites**

	ACP	SB	FIP
% Retained	88	80	97
% Urban Loss	6	13	1.5
% Agric. Loss	6	7	1.5

ducted to jointly provide multiple enhancements to wildlife, timber, and aesthetic values—all of which further the TREASURE Forest principle.

The use of federal and state incentive programs to foster tree planting on private lands has greatly impacted the forest

regeneration efforts of the state and nation. Further encouragement of stand management beyond the scope of contractual obligations will aid landowners and consumers in receiving maximum benefits from their invested tax dollars.

### References

- Alig, R.J., et. al. "Most Soil Bank plantings in the south have been retained; some need follow-up treatments." SJAF 4:60-64, 1980.  
 Kurtz, W.B., et. al. "Retention and Condition of Agricultural Conservation Program Conifer Plantings." JOF May, 1980.  
 Moulton, R.J. Unpublished, 1993. ♣

# Managing Vegetation with Goats

by DR. PETER MOUNT, Tuskegee Extension Service

**G**oats, a tool of forest management? You've got to be kidding! Why would anyone consider the possibility of using goats in forestry?

The answer is simple. Today there is growing pressure on forest managers to restrict the use of chemicals, to eliminate the smoke problems associated with controlled burning and to do away with the loss of topsoil caused by mechanical site preparation techniques. The search is on for environmentally acceptable substitutes that are effective biologically, socially and economically.

It has long been known that goats are browsing animals and will consume woody vegetation. They prefer woody plants to annuals, herbs, forbs and other plants. If goats can be trained to eat just the right plants or to eat all the plants on a given area, consider what this would do for precommercial thinning, hardwood control in pine plantations, site preparation or elimination of kudzu.

There are many ways in which goats could be used to enhance the tool kit of the forest manager. The most obvious uses of goats are:

1. Control of unwanted vegetation—kudzu.
2. Site preparation on recently cutover lands.
3. Control of hardwood competition in pine plantations.
4. Preharvest site preparation.
5. Control of vegetation in environmentally sensitive areas.

Kudzu—often referred to as “The Vine That Ate the South,” or the “Green Disease”—is a plant with which most people are familiar. It is well adapted to the climatic conditions in Alabama and spreads very rapidly. Kudzu was introduced into the United States in 1876 at the Philadelphia Exposition and was immediately seized upon as a landscaping plant. Soon thereafter it was promoted as a pasture plant for cattle feed since it had such a high percent of protein (17 percent). Unfortunately there was little way to contain this woody vine and there was no equipment which could be utilized to harvest it in an economical manner. At one

point in time kudzu was promoted as a soil stabilizer and grown in nurseries by the millions for free distribution to farmers in the South. At that time no one knew that millions of acres would be covered by this vine, which effectively shades out all other vegetation where it is growing. What was once a panacea has become a problem. The emphasis is now on control. Chemicals can be used to eliminate kudzu, but it is a multi-year, expensive tool to use. The current answer may be to utilize browsing animals as a control agent. Enter goats!

---

*Goats are not going to solve all the problems, nor are they going to replace existing tools, but they are another alternative which should be considered in future management decisions.*

---

At Tuskegee University a team of scientists has been working with the United States Forest Service to determine if goats are effective and under what conditions. To date, two different grazing intensities have been tried with five goats per acre being ineffective and 10 goats per acre being much more effective. Even with the goats it is not a one-year proposition to eliminate kudzu. A minimum of three years consecutive grazing during the growing season is required. Supplemental feeding of the goats during the last part of the second year and the third year is necessary to maintain goat health and weight gains. It does appear that sites which have been grazed for three years and then planted to a rapidly growing pine will be able to compete favorably with the kudzu. Since kudzu can grow up to six inches in one day, it is still too early to evaluate the results of this demonstration project. More work needs to be done on a long-term basis.

In west Alabama a project was undertaken to show that a goat owner could profitably rent his goat herd to a landowner for the purpose of clearing a site for planting pine. A recent clearcut area of 80 acres was used to determine if the goats could be an effective site preparation tool. The answer is a definite yes under the proper conditions and with good management. The goats must be placed on an area before the woody plants become four feet in height, otherwise they cannot consume the plants. The goats have a very definite dietary preference with some of the most prevalent plants being those least preferred. But when the goats become hungry enough they will even eat sweetgum, wax myrtle, bracken fern and the other species at the bottom of the dietary preference list. Unfortunately, loblolly pine was in the middle of the list and was eaten before the less preferred species.

In a similar type study in Arkansas the goats were used to control hardwoods in a young pine stand. By decreasing the grazing intensity to two head of goat per acre, the researchers were able to save the pine while consuming the unwanted woody hardwoods. In Alabama both angora and Spanish meat goats were tested for effectiveness in site preparation and both were effective. However, the Spanish meat goat was hardier and performed better on a weight gain basis. Greater profits were secured from the Angora goats because of the mohair production. The grazing in dense brush and briars had no impact on hair quality or production. The pines which were planted in the grazed area appear to be competing successfully with the residual hardwoods and sprout growth. More work is needed to refine the use of goats as a site preparation tool.

One promising idea which has not been tested is the use of the goats as a means of site preparing an area prior to timber harvest. If there is a hardwood understory or unwanted woody vegetation in a stand which is slated for clearcutting in the near future, it is possible to introduce goats to the area to eliminate the understory prior to harvesting. This would make the har-

*(Continued on page 24)*

# MANAGING FORESTS FOR WILDLIFE

(PART TWO OF A TWO-PART SERIES)

by STAN STEWART, Wildlife Biologist,  
Alabama Department of Conservation and Natural Resources, Game and Fish Division

**W**ild animals are integral parts of a forest ecosystem and any forest management activity affects their habitats. Habitat (which consists of cover, food, water and living space components) and the arrangement of habitat components are the keys to successful wildlife management. The aim of habitat management is to arrange cover, food and water within an animal's normal living space. Timber management practices can be used to manipulate forest and other vegetation into an arrangement that provides suitable habitat for a desired species if those practices are applied with attention to the animal's life requirements. Whether wildlife is the primary objective of forest management or secondary to timber production, the same management practices are utilized, but will vary in degree of application. Prescribed burning, thinning forest stands, various harvesting practices and forest regeneration can be tools to improve wildlife habitats. Their effectiveness depends on their application according to principles of wildlife biology.

Although each species of wildlife has unique habitat requirements, two principles can be applied in many wildlife management situations. They are the concept of diversity and the law of interspersions. As a general rule, habitat diversity translates into wildlife diversity and abundance. To varying degrees, all wildlife species need a diverse assortment of plants and vegetation types to flourish. Similar to this principle is the law of interspersions, which says that wherever two required habitat types for an animal meet, the edge between the two will be more favorable for wildlife than either type alone. According to the "edge effect" concept, wildlife density is directly proportional to the amount of edge for all species that require more than one vegetation type. It should be noted that interspersions includes both horizontal and ver-

tical dimensions since wild animals live and obtain their requirements in three dimensional space (see Figures 1 and 2). The basic rules of habitat diversity (that provides necessary habitat components) and interspersions (the arrangement of habitat components) are fundamental considerations in the application of wildlife habitat management practices. Management of forests or timberlands for wildlife should follow the same rules.

## Forest Improvement Practices

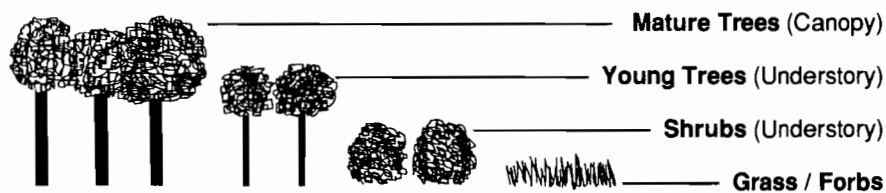
Various treatments can be applied to existing forest stands to improve their ability to support wildlife. Intermediate aged forests often lack the structural diversity attractive to many kinds of wildlife. For example, breeding bird densities in regenerating pine-hardwood forests may be as high as those in mature stands. But, densities may be low at mid-succession because of limited sub-canopy growth. Habitat improvement consists of measures to diversify these stands.

cover components necessary for their continued existence. Fire disturbance has played a major role in the ecology of many wildlife species and forest communities. In fact, the longleaf pine forests of the South were climax forests because of the prevalence of fire.

Because it is otherwise controlled in today's landscape, fire for wildlife and forest management must be prescribed. Usually the fires that are prescribed for timber management are not good burns for wildlife. And, too often, the fires that are prescribed for wildlife habitat improvement prove to be detrimental to wildlife. This is true because the plans ignore the rules of diversity and interspersions. A good prescribed burn for wildlife creates a burned-unburned mosaic that stimulates new vegetation growth for the future while retaining adequate cover for the present. The "patchy" result of such a burn intersperses a variety of plant species and cover types meeting the needs of wildlife. Various firing techniques can

**Figure 1. Vertical Density**

Vertical density, or layering, is the arrangement of cover types adjacent to one another.



A great tool of wildlife management is prescribed fire. Forest communities follow a pattern of succession to a climax stage in the absence of disturbances such as fire, wind, etc. However, disturbances are normal events in nature that interrupt succession to create varying stages of plant growth from early pioneer species to climax vegetation. Such variety is vital to many wild animals, providing food and

be utilized depending on the situation, but backfires are recommended for most wildlife habitats because they tend to leave unburned patches.

The ideal approach to prescribed burning for wildlife habitat improvement is to divide a tract into burn units and burn a certain amount of them each year. Adjoining units would not be burned in the same year, creating differing stages of

plant growth. Within burn units key cover such as plum thickets, abandoned orchards or old homesites should be protected from fire. A two-year burning rotation is recommended for quail and rabbit habitats, and a three-year rotation for deer and turkey. Exclusion of fire from predominantly pine sites for five or more years greatly reduces habitat quality for many wildlife species. As useful as the prescribed burn is for wildlife, it has its limitations. Burning is not generally applicable in hardwood forests. Also, prescribed burning alone will do little to improve wildlife habitat quality in dense pine forest with a closed canopy.

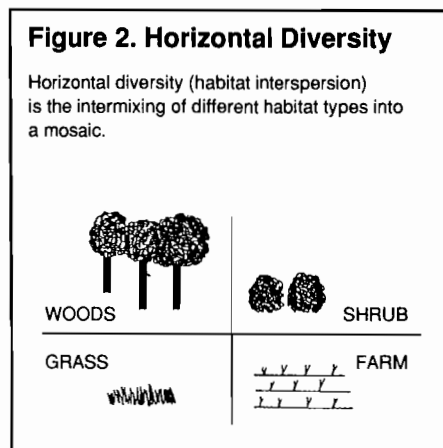
A forest composed mostly of a single layer of trees, whether it is a mature hardwood forest or a pine plantation, offers limited wildlife habitats. Thinning can be extremely beneficial to wildlife in these forests because removal of some trees from the stand makes space available for other kinds of vegetation, and sunlight penetration through the open canopy allows new plants to grow. Thinning can be used to promote vertical diversity within a forest, influence composition, and improve vigor.

Artificially regenerated pine forests are of low value to wildlife during mid-succession because of canopy closure and reduction of understory. Thinning can dramatically improve habitat quality of these stands. Ideally, pine plantations should be initially thinned (and prescribed burned) at age five to seven. Stocking should be reduced to about 60 square feet of basal area per acre.

Careful thinning can enhance mast production in hardwood forests. In most forest stands, a few high quality oaks produce a disproportionate share of the mast. During fall when mast is present, good mast bearing oaks and other species can be marked and observed over a two or three year period. Non-producing and otherwise inferior trees can then be removed. Thinning around the mast bearing trees will allow them to crown out and produce a larger crop. Thinning will also allow understory soft mast trees and shrubs to bear more fruit.

Thinning activities should be dispersed through a forest and conducted at varying intensity. The result is a "patchy" pattern from open understory to dense shrubby growth. Removing trees at varying intensity along a forest edge is a useful tech-

nique to create a transition zone that minimizes contrast between cover types. Such a gradual edge is best for most wildlife. For example, removing 75 percent of tree cover from the first 50 feet of forest edge, 50 percent of trees from the next 50 feet, and 25 percent of trees from the next 50 feet creates a cover condition ranging from open land to weed and shrub to forest.



When thinning or harvesting a stand, retain six or more den trees (trees with cavities) and at least that many snags (dead and dying trees) per acre. They should be at least 5 inches in diameter—the larger the better. These trees are used by a variety of birds, mammals and reptiles. Silvicultural thinnings tend to remove these important trees, so special efforts should be made to retain them.

### Timber Harvesting Practices

Timber harvesting, depending on the method, will create either even-aged or uneven-aged stands. Even-aged management utilizes clearcutting and shelterwood harvest. Uneven-aged management relies on single tree selection and group tree selection. Each method will favor some species of wildlife and adversely impact others.

With even-aged management, the mosaic created by cutovers interspersed through stands of older trees creates a diverse environment that provides habitats for an array of wildlife. Clearcutting and shelterwood cutting encourages vigorous growth of early succession herbaceous plants and new woody growth that provide abundant food, brood cover and escape cover for wildlife. They can result in new forests with a high component of soft and hard mast producing trees.

Even-aged forest management mini-

mizes vertical diversity in a stand, but allows for development of maximum horizontal diversity. In even-aged management, diversity is enhanced by manipulating the size, shape and age differential of each stand. Most wild animals will not abandon an established home range to move into better habitat. If their habitat begins to decline, they will remain in the declining habitat until they eventually die out. Only a few individuals will move out to occupy new habitat. For this reason, when even-aged management is practiced on a large scale, local abundance of a given wildlife species will be a temporary occurrence. The population fluctuates with succession because the habitat changes. To maintain stable populations of early to mid-successional stage wildlife favored by even-aged forest management, harvesting should be done in relatively small units. If the goal is to favor late-successional wildlife in even-aged forest, cutting units can be large if managed on a long rotation.

Size, shape and distribution of clearcuts have major effects on wildlife because of the radical change in cover types. For this reason, clearcutting should be well planned when wildlife is a major factor. For many kinds of wildlife, 20-acre or smaller cutting units are large enough. Cutting boundaries should be irregular, with fingers and projections of forest, to increase edge effect for wildlife. Relatively long, narrow cuts, and cuts that follow natural contours also create more edge. Forested corridors of 100 yards or more wide should be left between cuts and linked to existing forest. Thinning can be performed in these corridors to commercially utilize part of the trees, and they can eventually be harvested completely. Forest corridors should be retained along perennial streams, with extensions up the stream drainages. They generally shouldn't be wide enough to see through. The drainage corridors serve to separate cutover uplands and form a natural tie into a continuous forest network.

Some wildlife species need large tracts of continuous forest. This can be achieved by various means, and generally requires long rotations of 60-100 years or more. Even-aged management for these species can involve use of large cutting units, from 80 acres to several hundred acres in size. Even-aged sustained yield harvesting with small cutting units can provide

the same result. Either way a large amount of continuous forest is present.

Uneven-aged forest management also favors wildlife needing a continuous forest environment. Edge species are not favored. Vertical diversity is enhanced and horizontal diversity declines. With single tree selection, shade intolerant trees (such as oaks that are important to wildlife) will sprout but are suppressed in the forest. Group selection harvesting can improve forest habitat diversity because it removes the tree canopy from small areas across the forest and allow pockets of new vegetation to grow. The herbaceous, shrub and sprout growth provide browse, nesting cover and escape cover in otherwise uniform forest. Group selection also encourages regeneration of shade intolerant trees such as oaks that are needed for mast production. Single or group tree selection readily facilitates retention of den, snag and mast trees.

---

### Forest Regeneration Practices

Many animals need several stages of plant succession available to them to live, reproduce and flourish. That is why wildlife is abundant in areas that have a balance of older forest and regenerating forest. Several things can be done to enhance wildlife habitat when a forest is regenerated. During site preparation, efforts should be made to save living trees as well as snags because snags are temporary. Living trees continue to provide dens and mast. Soft mast trees such as dogwood, sassafras and black cherry should not be destroyed. Retain some groups or clumps of mature trees in clearcut areas. These islands should be about a quarter-acre in size and contain mast bearing trees such as oaks or beech.

If pine stands are artificially regenerated, tree planting rates can be reduced to around 300 trees per acre. This will delay

canopy closure. On appropriate sites, longleaf pine can be planted. An open canopy is more easily maintained with longleaf than with loblolly or slash pine because longleaf has a smaller crown. For the same reason, longleaf stocking can be higher than for loblolly or slash and still permit an open canopy. Mixed forest stands composed of pine and hardwoods beneficial to wildlife can be created by reducing pine planting rates to around 100 trees per acre and selectively controlling competition with herbicides.

Habitat diversity can be improved by artificially regenerating pine stands in regions of mostly hardwood forest. These stands provide escape cover and other benefits. They should be no larger than 20 acres and irregularly spaced. Similarly, hardwood stands can be retained or allowed to develop in areas managed for pine. Forested corridors between clearcut and regenerated pine stands and along streams are logical places to manage for hardwoods.

There are basically four options in forest management: exploitation, even-aged, uneven-aged management and preservation. Exploitation, the utilization of a resource for purely selfish purposes, is still too often the philosophy of land use, but is not a suitable management strategy. At the other extreme, preservation promotes old-growth or climax forest landscapes. We need such natural communities for their environmental stability, but these areas do not have the productivity to sustain us. Responsible management is the reasonable approach for much of the land. Forest management that preferably combines even-aged and uneven-aged management practices can be applied in a manner to create habitat diversity that supports wildlife and provides timber products.

From an ecological perspective, pro-

duction is highest in early stages of plant succession and declines in later succession. So wildlife *numbers* can become prolific in areas of early forest succession because of profuse plant growth. On the other hand, wildlife *diversity* tends to increase with succession (with some declines at mid-succession and climax). Grassland will support some wildlife species, young forest more species and maturing forest will have a greater variety of wildlife. Obviously, the most wildlife and greatest diversity of wildlife will be found in landscapes composed of a mixture of successional stages and habitat types ranging from pioneer to climax communities. The spectrum of wildlife in the landscape will reflect that land's habitat diversity and interspersion.

---

### References

- Barnes, T.G., L.R. Kiesel and J.R. Martin, eds. **Private Lands Wildlife Management**. Lexington: Kentucky Cooperative Extension Service, 354 pp., 1992.
- Dasmann, R.F. **Wildlife Biology**. New York: Wiley and Sons, 231 pp., 1964.
- Hurst, G.A., J.J. Campo and M.B. Brooks. "Deer Forage in a Burned and Burned-Thinned Pine Plantation." Proc. Annu. Conf. S.E. Assoc. Fish and Wildlife Agencies, 34:476-481, 1980.
- Odum, E.P. **Ecology**. New York: Holt, Rinehart and Winston, 152 pp., 1963.
- Rosene, W. **The Bobwhite Quail, Its Life and Management**. Sun Press, Hartwell, 418 pp., 1974.
- Smith, D.R., ed. "Proceedings of the Symposium on Management of Forest and Range Habitats for Nongame Birds." Washington, D.C.: USDA-Forest Service, Gen. Tech. Rep. WO-1, 343 pp., 1975.

*Part 1 of this article appeared in the Fall 1993 issue of Alabama's TREASURED Forests.* ♣

---

### Managing Vegetation with Goats

*Continued from page 21*

vesting much easier and would allow for immediate replanting of the area. No work has been conducted in this area.

Researchers from Langston University in Oklahoma have utilized goats to control the erosion of the balds on the top of the Appalachian Mountains along the Appalachian Trail. In this area, which is utilized by thousands of hikers each year,

the use of fire or chemicals has been eliminated by administrative decision. To prevent the balds from being overrun by unwanted vegetation, goats were used. The goats were fenced in small areas until they had reduced the unwanted vegetation and then were rotated to the next area. In this manner the United States Forest Service hopes to prevent natural succession from eliminating the grassy balds with their magnificent vistas as they occur along the Appalachian Trail. Goats can be

used in environmentally sensitive areas because those people who are not willing to accept chemical or mechanical means of control are willing to accept biological control using goats.

Do goats have a place in forest management? The answer is a qualified YES! They are not going to solve all the problems, nor are they going to replace existing tools, but they are another alternative which should be considered in future management decisions. ♣



# What Are Super Seedlings?

by JOHN RICE,  
Nurseries and  
Tree Improvement Section,  
Alabama Forestry Commission

**H**ave you heard phrases such as “Super Seed/Seedlings,” “Genetically Improved Seed/Seedlings,” or “Plus Trees” and wondered what these phrases meant? Each of these phrases is used to refer to seed, seedlings or trees which are from selections which appear to be, or have been proven to be, outstanding performers when compared with others under the same conditions.

In today’s fast-paced world, efforts are constantly being made to find ways to do more with less: more production using less money, more products using less people, more output using less input, more crops using less land, etc. Forestry has been facing the same situation.

Over the past few centuries forestry has progressed from the “cut out and get out” mode to intensive forest management. The forest land base has continuously been shrinking due to needs for urbanization, road construction, lake construction and more recently concerns for things like our environment and endangered species. The need for forest products has grown with the increase in population and, combined with the reduction in forestland, has resulted in the need to produce more forest products on less acres. One way to achieve this is through a successful Tree Improvement Program (TIP).

During the early days of reforestation seed collection was done simply by paying so much per bushel for cones or collecting the cones yourself. The basic selection criteria, besides species, was to find limby, bushy trees loaded with cones. Wolf trees and field pines were

---

*Workers control pollinate pines at Geneva State Forest.*



# Seeing. Scenic Alabama

## Part 2

by DOUG PHILLIPS,  
Alabama Museum of Natural History

Black Belt prairie

**T**his article is the second part of a two-part series. Part 1 in the Winter 1994 issue described a variety of scenic areas in northern Alabama.

The exciting terrain of Alabama's northern region, with its rugged mountains, deep valleys, and many tumbling waters, is a setting that most visitors find rich with scenic qualities. The physical shape of this landscape is due mainly to two geological processes. The first occurred over 300 million years ago, during the Paleozoic era, when the great force of shifting land masses pushed up the Appalachian mountain chain from Canada to North Alabama. Originally these mountains were very high—possibly as high as 30,000 feet. But during the millions of years since their creation, the highlands of Appalachia have been undergoing another process—that of continuous, gradual erosion. Thus the once formidably steep uplands of Alabama are now worn into the beautiful ridges, plateaus, and valleys we see in the northern part of our state today.

In contrast to the rugged relief of northern Alabama, southern

Alabama is characterized by much gentler terrain, with prairielands, rolling hills, and meandering streams. Therefore, visitors to southern parts of the state do not encounter the kind of dramatic features that are common in the northern part of the state. In fact, visitors to this lower region sometimes need a little interpretive assistance to realize the significant natural qualities that abound. Many of the region's otherwise pleasant features take on added appeal when their geological history is understood.

The geological history of southern Alabama is tied closely to that of the Appalachians. Various eroded materials from Alabama's highlands have been carried by rivers and spread along ever changing deltas and shorelines that occurred over the southern part of Alabama since Paleozoic times. These deposits have helped create a region called the East Gulf Coastal Plain, a broad geological province that extends across the lower reaches of the Southeastern U.S. and includes the entire southern portion of Alabama.

The Coastal Plain is so-named because it is a region that was



periodically covered by shallow seas during the last 280 million years of geologic time (during the Mesozoic and Cenozoic eras). Thus the landscape of the southern half of Alabama is largely the result of the ebb and flow of ancient waters that eventually receded to form our present-day Gulf of Mexico. This region is the largest part of Alabama, and there's no way to do justice to its range of natural qualities in the short space of an article. But one way to provide a meaningful overview is in relation to general land forms encountered across the region.

### FALL LINE FEATURES

Many of Alabama's first communities were established along the **Fall Line**. The Fall Line marks the lower edge of the rocky highlands of Appalachia. As its name suggests, this feature is the southernmost tier of waterfalls, located along a line that extends all the way across the state.

From a practical standpoint, these waterfalls were useful to early settlers for powering gristmills. Furthermore, the absence of waterfalls below the Fall Line meant easy river travel down

to Mobile and the Gulf. So, the Fall Line was an attractive place for businesses and a natural juncture for commerce. But it was also a juncture of contrasting landscapes, providing an uncommon variety of terrain attractive for aesthetic reasons as well.

A canoe trip down the **Cahaba River**, for example, is an experience to remember—especially in late springtime. As the Cahaba approaches the Fall Line in Bibb County, it passes over numerous rocky shoals that are dressed in the white brilliance of the Cahaba Lily. This lily is an endangered species for which the shoals of the Cahaba River provide a last precious habitat.

Heading downstream south of the town of Centreville, the Cahaba slows to hug the sand bands of the **Fall Line Hills**, a stretch of hill country that parallels the Fall Line for much of its length. For those who don't mind a long trip over mostly two-lane blacktop, the drive along Highway 82 between Tuscaloosa and Montgomery offers many panoramic views of the Fall Line Hills. A more adventuresome way to enjoy the beauty of these hills is along any one of the remote backroads of the Oakmulgee Division of the **Talladega National Forest**. Here you can find grand vistas of pine forest laced with mixed southern deciduous forest.

If seeing rare wildlife is a scenic thrill for you, the Oakmulgee contains some of the nation's best remaining habitat for the endangered red-cockaded woodpecker. Such habitat is typically found in tracts of aging longleaf pine that are very beautiful in their own right.

Just west of the Oakmulgee lies a feature of both natural and cultural significance. **Moundville Archaeological Park** is North America's best preserved site containing earthen mounds built by the prehistoric Mississippian Period Indians. This 300-acre site along the Warrior River near the town of Moundville was a major cultural center between 700 and 1,300 years ago. The Indians selected this area because it is a broad river terrace with good agricultural soils while also situated near a variety of Appalachian and Coastal Plain habitats. Here there are an unusual diversity of plants, animals, and other natural resources. The Indians' practice of building earthen mounds was, in part, a symbolic expression of their spiritual relationship to the land and the rejuvenating powers of the earth.

Today at Moundville Archaeological Park you will find 20 of these mounds still standing in quiet mysterious beauty, a silent reminder of a people who once ruled across the Southeast for hundreds of years before European arrival.

### BLACK BELT REGION

The **Black Belt** of Alabama is probably best known for its history of plantation farms, established throughout this broad band of central Alabama because of the region's unusually rich "black" soils. Less known is the fact that these soils are due to a geological strata of limy sediments deposited from oceans of the Mesozoic era, a time when reptiles (and dinosaurs) were dominant on earth.

Alabama's Black Belt contains some of the best Mesozoic age fossil sites in the nation. One of these is the **Harrell Station Paleontology Site**, a 130-acre tract in Dallas County. Harrell Station, owned by the Alabama Museum of Natural History, has been subject to scientific study for over 100 years and has yielded countless fossils primarily of the Cretaceous Period. Recent finds include the remains of a giant sea dwelling

crocodile-like creature called a mosasaur. Here the Black Belt's ancient chalky sediments have been exposed by erosion to form an extensive "badlands" of deep gullies. Perhaps not your classic kind of scenic area but, nevertheless, a feature that often touches visitors with a sense of gripping eeriness.

A uniquely impressive view of the Black Belt's limy geology is on the Tombigbee River at Epps, Alabama. Great white bluffs of the **Selma Chalk** sediments are exposed clean and clear along the river's banks.

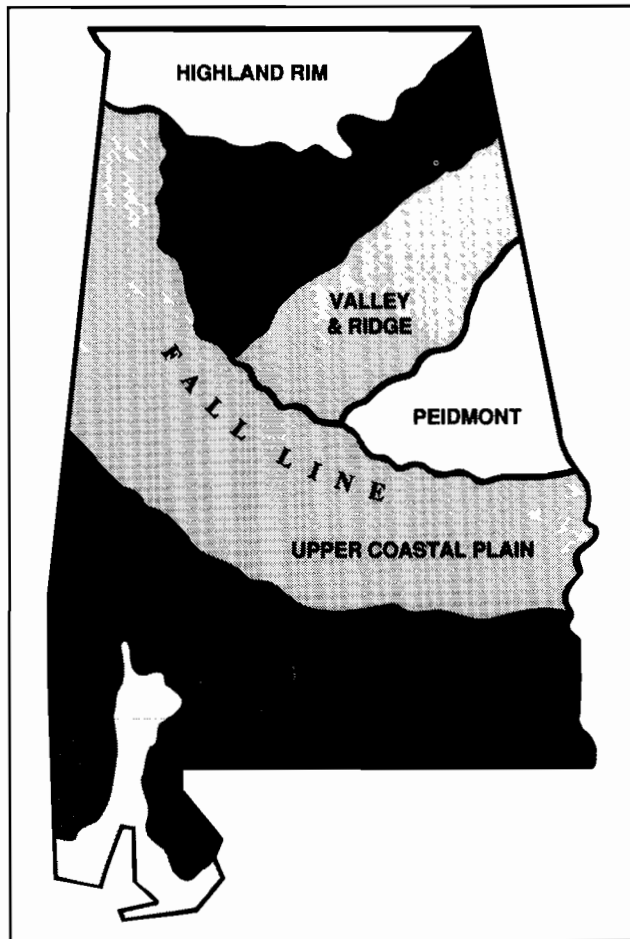
In general, Black Belt topography is a mix of flat to rolling prairieland. Whether the land lies in pasture, crops, or wildflowers, it is the sort of scenic countryside that evokes images of Early America. There are many places to drink in this lovely landscape. A favorite of mine is the stretch of Highway 25 south of Greensboro.

### SOUTHERN HILLS

Here and there across southern Alabama are various hill regions, each with its own distinctive natural character. The **Red Hills Region**, for example, is marked by red soils produced by iron oxide sediments. Once again, this special geology is the result of prehistoric marine environments that occurred in the Coastal Plain. A part of the Red Hills seen frequently by travelers is along Highway 231 south of Troy, where there is sufficient farm and open space to provide hilltop-to-hilltop vistas. For a close look you can take a leisurely side trip down almost any adjoining rural road, many of which extend well into prime wild backcountry and home territory for the endangered red hills salamander.

Another hill region is the **Southern Pine Hills**, a several county area reaching from just north of the Florida panhandle westward to southwest Alabama. This region is unlike many parts of Alabama where pine trees have been established deliberately or incidentally through human activity. The Southern Pine Hills come by their green needle forests naturally, largely as a result of the region's sandy elevations in conjunction with local climate.

The beauty of this region can also be enjoyed along various roads of south Alabama, but a particularly inviting area is near the edge of the region, in the **Conecuh National Forest**. The Conecuh has miles and miles of piney hills, river bottomlands (along the Conecuh River, for example), several fishing ponds, and numerous hidden clear-water "blue" springs.



### COASTAL REGION

Southern Alabama has scores of other intriguing features such as the **Wiregrass Region**, named for a special kind of wiry grass that once prevailed in much of this part of extreme southeast Alabama. And there is the lure of dozens of subtropical southern rivers, like the **Perdido** and the **Escatawpa**, sections of which are exceptional for fishing or canoeing.

And then there is the magnificent, massive wetland, the **Mobile-Tensaw Delta**. The Mobile-Tensaw lies just above Mobile Bay and is the gateway to the Gulf for watersheds that drain most of Alabama and parts of Mississippi, Tennessee, and Georgia. This is not your average river delta. It is almost a quarter

million acres of marsh, swamp, cypress, and river bottom hardwoods. It is the second largest river delta in the nation (the Mississippi Delta is the largest). The Mobile-Tensaw is also home for one of the greatest fish and wildlife populations in the world. From alligators to black bears, this is a wetland of truly wild wonder and beauty.

Probably the most popular part of South Alabama is the **Gulf Coast**. Many charming bays and bayous only add glamour to Alabama's remarkable sugar white beaches, among the most beautiful in the world. It is no longer accurate to call Gulf Shores, Alabama "the best kept secret in the nation." This resort community is being discovered at a fast pace. However, one nearby natural area is still a secret, the unblemished dunes and coastal woodlands of the **Bon Secour Wildlife Refuge**. But don't tell.

And here our story comes full circle. Alabama has such beautiful white beaches thanks to layers of North Alabama quartz, formed by the phenomenal mountain building pressures that created the Appalachian Highlands. As the uplands have weathered over millions of years, eroded bits of quartz were carried southward, pulverized, washed, and refined, eventually becoming the resilient sands of Alabama's Gulf beaches.

In summary, the scenic qualities of Alabama are part of the much larger design and history of planet earth. Some 600 million years ago the Appalachian Region was itself an ancient seabed. Then, during the Paleozoic era geological events lifted it up to become mountains. But as time passes, the mountains are returning to the sea. Geological change continues, and so does the wonder of it all.

If you would like to know more about Alabama's geological history, the state's natural diversity, or about fossils that have been found in Alabama, you are invited to join the **Alabama Natural History Society**, Alabama Museum of Natural History, Box 870340, University of Alabama, Tuscaloosa, Alabama, 35487-0340; (205)348-2040. ☎

# Facts About Growing Christmas Trees

by LOYD OWENS, TREASURE Forest Landowner and Christmas Tree Farmer

Growing Christmas trees is not easy, nor is it a get-rich-quick enterprise. It can, however, provide additional income for those who don't mind hard work and enjoy spending a lot of time with the trees. Approximately 100 hours of work is required per acre from planting to harvest.

Virginia pine is the species planted most in Alabama for Christmas trees, but other types—such as leyland cypress—are also being planted. Sources for the seedlings are available at your local Extension office. It is a good idea to start off small until you gain experience managing Christmas trees. One acre is a good starting point for a new grower, and the acreage can be increased with time. The total number of acres will depend on space and available labor. Once the operation gets going, seedlings will have to be planted every year to ensure annual harvests.

Spacing of the trees will largely depend on the area to be planted and the type of equipment used. Plantings 6 feet apart in rows 8 feet apart will work well with small tractors, but five by five is satisfactory for lawn mowers and other small equipment. The site may also determine the spacing as well as the type of equipment used. A well prepared site will help insure better survival, easier mowing and will make jobs like shearing and harvesting both easier and safer. Abandoned fields are easy to prepare and are usually smooth.

While fertilizing Christmas trees may be beneficial, it may not prove practical. There will be some increased tree growth, but there is also increased weed and grass growth. Generally, research has not shown the use of fertilizer to be cost effective.

Weed and grass control in Christmas

trees is a major problem. Applications of recommended chemicals is a must. Pre-emergence sprays on young trees early in the season should be followed by post emergence applications during the growth season. Care must be taken not to damage



Loyd Owens tags a tree for a customer.

trees with chemicals which are directed toward the rows. Row middles need to be covered with vegetation to prevent erosion and mowed to keep down vegetative competition with the trees.

The initial cost of seedlings and planting is not a major part of the overall cost of Christmas tree farming, when compared to the labor requirement. Shaping the tree is the single most labor intensive job in the entire operation. This must be done twice annually in Central Alabama during the latter part of the months of April and July. There are a number of shearing tools to make the job easier and quicker. For the early shearing a mechani-

cal tool can be used and then a knife for the late shearing.

Shaping the trees begins in the second year, and it is important to get started correctly. Most trees are cut with about a 60 degree taper, which is suitable for the

majority of customers. A tendency is to let the bottom of the tree become too wide as shearing continues over several seasons.

Observing techniques of other growers and practicing will develop the skill to properly shape trees with the desired taper and bottom width. Good management over a period of four to five years is required to grow saleable trees five to seven feet tall. Proper shaping is important beginning in the second year in order to get as many trees as possible ready for harvest in four to five years. At best, only about 65 percent of the seedlings will develop into trees suitable for harvest due to insects, diseases and other problems.

Marketing of the trees will depend on location and the size of the operation. "Choose and cut" works well for smaller growers and those located near heavily populated areas. Large operators usually need to line up wholesale markets. The choose and cut

method can be more fun because you get to know your customers. It is possible to sell more trees wholesale, but there will be less profit per tree.

Information on all phases of Christmas tree production is available at county Extension offices, but it is a good idea for a prospective grower to visit several other producers before deciding to invest money in this venture. This way the pros and cons can be evaluated before any money is invested.

In summary, growing Christmas trees can be a profitable and enjoyable venture for those willing to make the commitment. ♣

# Approved Amendment Will Provide Funding for Firefighters

by ROY MOTT, Alabama Forestry Commission

**H**istory was made on May 6, 1993! The Fire Service of Alabama joined together and worked with the Alabama Legislature to pass a true fire service bill. The citizens of Alabama will have the opportunity to vote on the measure in the form of an amendment during the June 7 election.

The proposed 1 mill ad valorem tax, upon approval by the people of Alabama, will provide funding for our state Fire College, the Alabama Forestry Commission and paid and volunteer fire departments, plus provide a low interest loan fund for our fire departments.

Alabama's forests are truly treasures to behold, not only for the beauty that our forests display, but the clean, pure air that is given off by our trees and the streams of water that pass through these lands. Our forests provide shelter for wildlife, jobs for the people of Alabama, and a future for our younger generation.

You as landowners are to be commended for the superior job that you are doing as TREASURE Forest landowners. The protection of these natural resources is why the proposed 1 mill ad valorem tax is important. It will provide for better education in fire training programs, provide



Coleen Vansant

funds for the Alabama Forestry Commission to purchase additional tractors and firefighting units, and provide funds for volunteer and paid fire departments to be used for the purpose of upgrading their equipment and training programs. This stable funding will aid the fire service in protecting our lives and property from the

devastation of fire. Any time stable funds are provided to rural fire departments it enables them to purchase better equipment and training, which in turn provides better fire protection and lower insurance rates on our homes and property.

What will all this cost us as tax payers? A 1 mill tax will cost .001 X the assessed value of the property. Example: A home that is appraised at \$100,000 is assessed at 10 percent of its value, which would be \$10,000 minus the homestead exemption of \$4,000. The homeowner would then pay tax on \$6,000 X .001, which equals \$6 a year. On the other hand, for 100 acres of timberland the cost would be \$2.75 a year.

Support and passage of this 1 mill ad valorem tax will provide much-needed stable funding for Alabama's fire service and support our volunteer firefighters who put their lives on the line each day for us, never asking for anything in return. Stable funding will enable the Forestry Commission to replace old equipment and add new firefighting units where needed. In addition, it will support our state Fire College so we can better train and educate firefighters to better serve and protect our communities and forestlands. ☝



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

BulkRate  
U.S. Postage  
**PAID**  
Permit No. 109  
Montgomery, AL