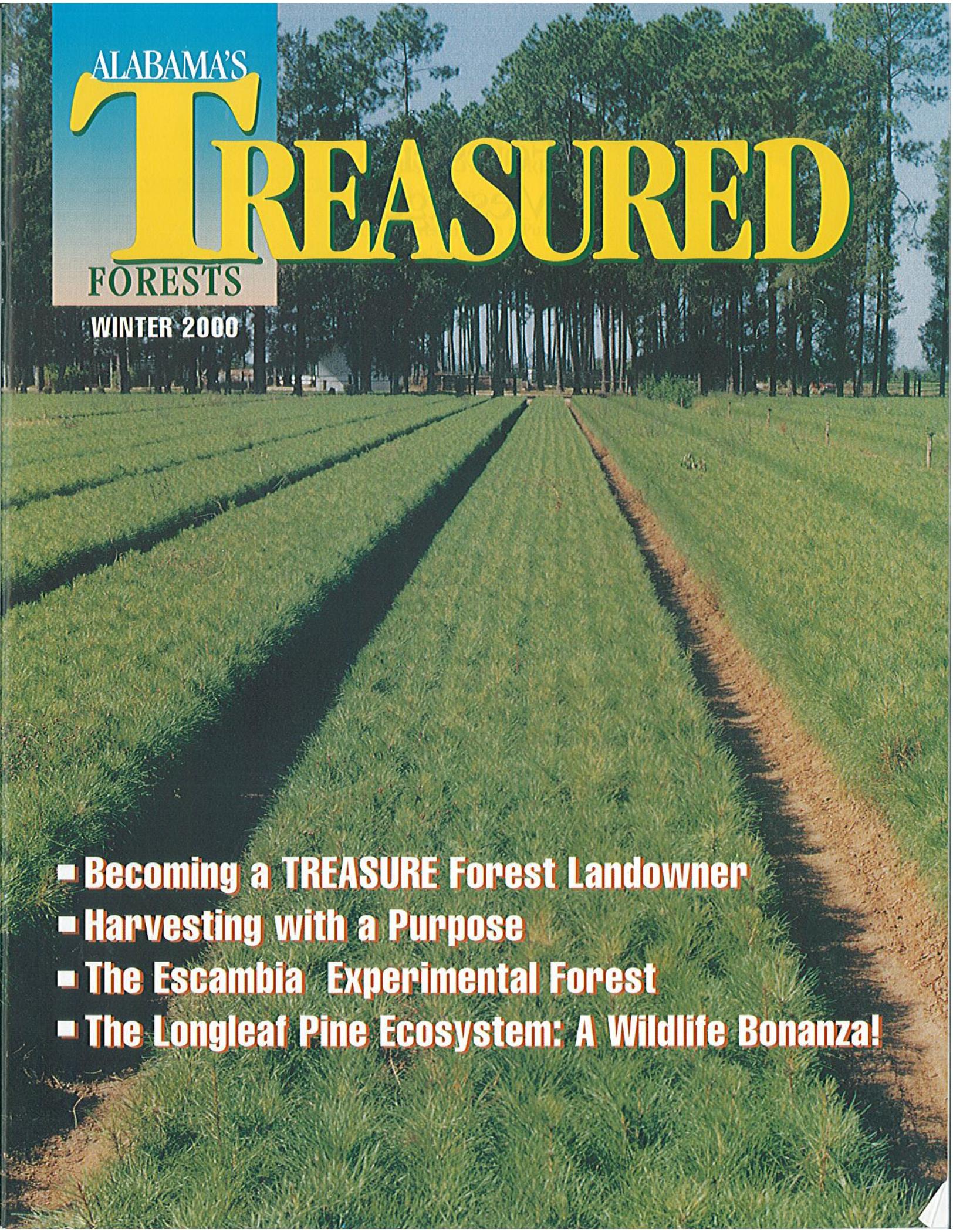


ALABAMA'S

TREASURED

FORESTS

WINTER 2000

- 
- **Becoming a TREASURE Forest Landowner**
 - **Harvesting with a Purpose**
 - **The Escambia Experimental Forest**
 - **The Longleaf Pine Ecosystem: A Wildlife Bonanza!**



Timothy C. Boyce

State Forester's Message

By **TIMOTHY C. BOYCE**
State Forester

MANY of you may be familiar with the naturalist William Bartram (1739-1823). His exploration of the South began in 1773, and his travels across Alabama went from early July 1778 and ended in early January 1779. In 1791 Bartram published his "Travels," which was an account of his journey through the Southeast. I recently read Bartram's work and would like to share some of it with you.

Bartram's journal is a must read for those who are interested in the natural world of Alabama and the native Americans who inhabited our great state. As he traveled through Alabama and the Southeast, Bartram found a fascinating world of beauty and diversity. He writes extensively about the diversity not only in terms of the natural world but also in the people he meets. He encountered many different tribes or cultures of native Americans with different languages and customs as well as people from different ethnic backgrounds, such as the French who inhabited the Mobile area. Today Alabama is still one of the most diverse places in the world both naturally and culturally. We must continue to recognize the strength in this diversity as we continue to make Alabama better for people through forestry.

Here are some excerpts from Bartram's journal. The spelling and terminology are taken as is from the book. If you would like to read more of Bartram's journal, it is available at most public libraries.

"Early next morning, our guide having performed his duty, took leave, returning home, and we continued on our journey, entering on the great plains. (Bartram is describing the Black Belt south of Tallassee, Alabama.) We had not proceeded far before our people roused a litter of young wolves, to which giving chase, we soon caught one of them, it being entangled in high grass—this creature was about half the size of a small cur-dog, and quite black . . ."

*"A few trees and shrubs or undergrowth, which were entangled with grape vines (*Vitis campestris*) of a peculiar species; the bunches (racemes) of fruit were very large, as were the grapes that composed them. The Indians gather great quantities of them, which they prepare for keeping, by first sweating them on hurdles over a gentle fire, and afterwards drying them on their bunches in the sun and air, and store them up for provision."*

*"We now entered a very remarkable grove of Dog wood trees (*Cornus florida*), which continued nine or ten miles unalterable, except here and there a towering *Magnolia grandiflora* . . . These trees were about twelve feet high, spreading horizontally; their limbs meeting and interlocking with each other, formed one vast, shady, cool grove, so dense and humid as to exclude the sun-beams, and prevent the intrusion of almost every other vegetable, affording us a most desirable shelter from the fervid sun-beams at noon-day. Early next morning we arose, hunted up our horses and proceeded on . . ."*

"This district exhibited a landscape very different from what had presented to view since we left the Nation, and not much unlike the low countries of Caroline; it is in fact one vast grassy savanna and Cane meadows, intersected or variously scrolled over with narrow forests and groves, on the banks of creeks and rivulets, or hommocks and swamps at their sources; with long leaved Pines, scatteringly planted, amongst the grass . . ."

Continued on Page 21



Vol. IX, No.1

Winter 2000

Commissioners

- David Long, Chairman
- Gary Fortenberry, Vice Chairman
- Jerry Lacey
- Charlie Hamilton
- Jimmy Samford
- James D. Spears

State Forester

Timothy C. Boyce

Assistant State Forester

Richard H. Cumbie

Alabama Forestry Planning Committee

- School of Agricultural and Environmental Sciences, Alabama A&M University
- Alabama Cooperative Extension System
- Alabama Department of Conservation and Natural Resources
- Alabama Department of Education, Vocational Division, Agribusiness Education
- Alabama Farmers Federation
- Alabama Forest Resources Center
- Alabama Forestry Association
- Alabama Forestry Commission
- Alabama Soil and Water Conservation Committee
- Alabama TREASURE Forest Association
- Alabama Wildlife Federation
- Association of Consulting Foresters, Inc., Alabama Chapter
- Alabama Agricultural Experiment Station, Auburn University
- College of Agriculture, Auburn University
- School of Forestry, Auburn University
- Tennessee Valley Authority
- College of Agriculture, Environmental and Natural Sciences, Tuskegee University
- USDA-Farm Service Agency
- USDA-Rural Development
- USDA-Forest Service, National Forests in Alabama
- USDA-Forest Service, Southern Region, State and Private Forestry
- USDA-Natural Resources 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

- Tim AlbrittonAlabama Forestry Commission
- Pat ButlerAlabama TREASURE Forest Association
- Kim GillilandAlabama Forestry Commission
- Tilda MimsAlabama Forestry Commission

EditorKim Gilliland

CONTENTS

- 4 The Creeks Tree Farms** by Coleen Vansant and Don East
- 7 Alabama TREASURE Forest Association, Forming a Network** by Bobby Dean
- 8 Harvesting with a Purpose, Part 1: Intermediate Harvests** by Billy Rye
- 10 100 Years of the National Cooperative Soil Survey-And Still Learning** by Julie A. Best
- 12 Helene Mosley Memorial TREASURE Forest Award Winners 1978-99**
- 13 History of the Helene Mosley Memorial TREASURE Forest Award** by Pat Butler
- 16 E.A. Hauss Nursery Seedlings**
- 20 Why You Need a Forest Management Plan and Where to Get One** by Tim Albritton
- 22 Becoming a TREASURE Forest Landowner**
- 25 The Escambia Experimental Forest** by Charles K. McMahon
- 28 The Longleaf Pine Ecosystem: A Wildlife Bonanza!** by Tom Counts
- 30 Environmentally Safe Deer Waste Disposal** by Joan Love Smith

DEPARTMENTS

- 2 State Forester's Message** by Timothy C. Boyce
- 15 Landowners Legislative Alert** by Jay Jensen
- 19 Trees of Alabama: American Beech** by Kim Gilliland

COVER: E.A. Hauss Nursery in Atmore, operated by the Alabama Forestry Commission, grows more than 40 million seedlings annually. For species and ordering information, see pages 16-18. Photo by Kim Gilliland.

Alabama's TREASURED Forests (ISSN 0894-9654) is published quarterly by the Alabama Forestry Commission, 513 Madison Avenue, Montgomery, AL 36130. Telephone (334) 240-9355. Bulk rate postage paid at Montgomery, Alabama. POSTMASTER: Send address changes to: Alabama's TREASURED Forests, P.O. Box 302550, Montgomery, AL 36130-2550.

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

The Creeks Tree Farms

12 creeks that flow through 13 tracts give the farm its name.

By **DON EAST**

TREASURE Forest Landowner, Clay County, and

COLEEN VANSANT

Information Specialist, Alabama Forestry Commission, Cullman, Alabama

MOST PEOPLE dream of owning a tract of land with a creek or spring flowing from it. But what if you bought 13 different tracts of land and 12 of them were located on creeks? That's what happened to Don and Lou East of Clay County, and that's also the how their free farms got the name "The Creeks Tree Farms."

The East's 13 farms lie in the mountain and valley section of east central Alabama and are located in Clay, Randolph and Cleburne counties. The couple says they weren't looking for land with water supplies, but they are sure glad it happened. The Hatchet, Fox, Crooked, Buck, White Oak, School, Mad Indian, Camp, and Terrapin creeks flow through 12 of their 13 farms.

Don says that he couldn't help but become interested in forestry and the outdoors. In his youth he spent a lot of time in his grandfather's logging camps around Clay and adjacent counties. According to Don, several previous generations of his family were in the small sawmill business as well as being farmers. "My grandfather, Johnny Cleveland, taught me how to cruise timber and identify trees before I got the ABC's down pat in grade school," says Don. But it didn't take young Don very long to figure out that the sawmill and farming businesses in those days were hard work and low

pay. With no opportunity for a college education, he joined the U.S. Navy immediately after high school graduation in 1957 and remained on active duty for 36 years.

Don saved his money and in 1962 purchased his first 40 acres of timberland from his uncle for \$1,500. Buying timberland seemed like the natural thing to do. He knew the forestry trade and reasoned that if managed correctly it would probably supplement his Navy retirement someday, as well as provide him a place of his own in which to hunt.

Acquiring Forestland

Throughout his career as a Naval flight officer, Don came home to Clay County as often as he could get leave. Each time he came home he spent almost all of his time buying additional timberland and managing what he already had. As one can imagine, it was sometimes difficult to arrange for timber harvests and reforestation projects when he was stationed on the other side of the globe. Through the assistance of agencies like the Alabama Forestry Commission and the Agricultural Stabilization and Conservation Service (now the Farm Service Agency), he was able to continue his forestry programs as if he were home in Clay County.

While stationed in Spain, Don found a partner in the forestry business—his

wife Lou. They were married in 1983 while Don was a professor of Naval science at the Naval War College in Newport, Rhode Island. Lou was raised in Florida and spent a lot of time in the outdoors with her father, Harvey Holland. With Don being of Creek Indian ancestry and Lou of Cherokee descent, they both had the same burning passion and respect for nature; they agreed to continue buying timberland in Alabama when they could find the right deals. By the time Don retired



The Easts proudly display their TREASURE Forest number 1187 along with their sign.

from the Navy in 1992, they had acquired a total of 570 acres and had used most of the available federal and state cost-share programs to assist in the management and improvement of their property.

After Don retired the couple moved to Clay County where Lou took a job at a local bank. Since 1992, they have acquired an additional 404 acres, and today own a total of 974 acres of timberland. Of the total, 525 is in pine timber with about half being planted pines and the other natural growth. The remainder of the timberland is in either mixed pine/hardwood or pure hardwood stands. Don says he envies those lucky enough to inherit forestland. "In our case we had to buy every single acre, and I think that gives us a greater appreciation for what we have accomplished." He adds that investing in timberland can be a profitable as well as a fun venture.

Don's interest in forestry and land management was increased when he became involved in both the Clay and Randolph County Forestry Planning Committees.

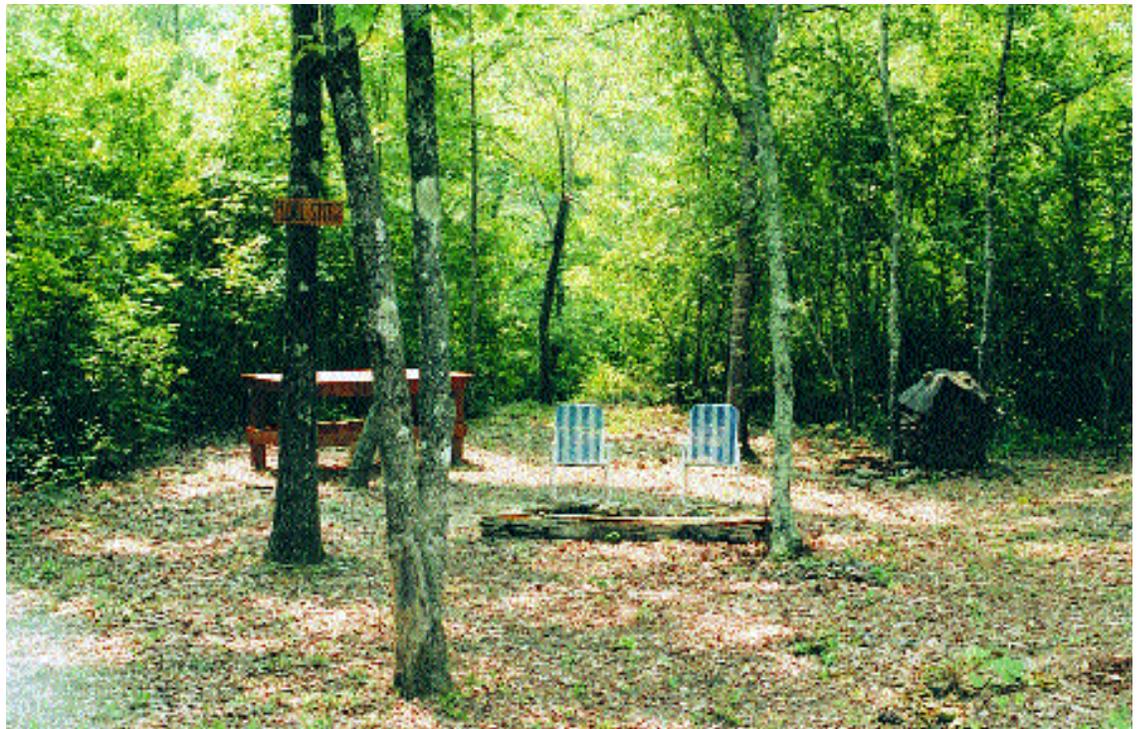
The timber and kindling stumps harvested off the East property over the years have paid for the land, and Don and Lou are excited that all future harvests will be profit. As is the case when you deal with Mother Nature, they have also had their share of bad luck over the years. They lost timber to the snowstorm of 1993, Hurricane Opal, tornadoes, ice storms, fire, pine beetles, and beavers. Fortunately, most of what they lost was still marketable. They say the only natural disaster they have managed to escape is an earthquake.

Involvement in TREASURE Forest

The Easts first learned about Alabama's TREASURE Forest Program in 1993 and quickly fine tuned their management plan to become certified. Their

land was certified as a TREASURE Forest in 1996, and that same year Don became a member of the Alabama TREASURE Forest Association's Board of Directors as well as the TREASURE Forest county leader for Clay County. Since then, both Don and Lou have been heavily involved in the TREASURE Forest Program. Their farms were selected as the Helene Mosley Memorial TREASURE Forest Award winner for the Northeast Region in 1999.

tion, aesthetics and environmental education. Like most TREASURE Forest owners, sharing their timberland and knowledge with others is one of the most rewarding aspects. They routinely have the local Clay County FFA and Randolph County Vocational School forestry students on their property to prepare for competition. A Boy Scout troop from Montgomery uses the camping site on Hatchet Creek each year to work on forestry and wildlife related merit badges.

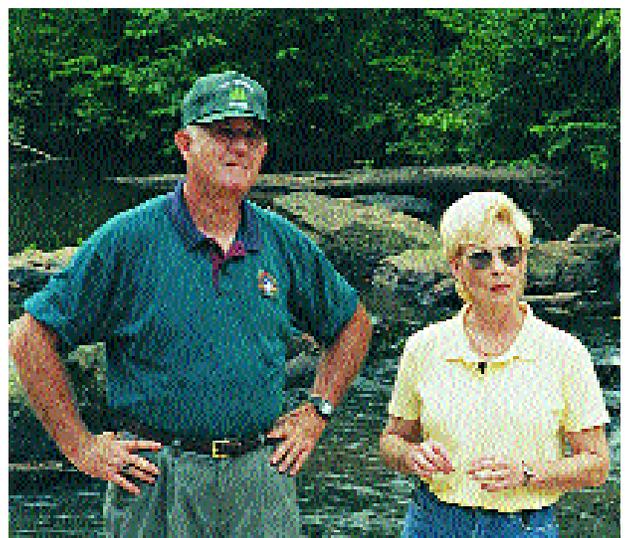


Don and Lou have done much of the work on the farm themselves, like creating this picnic site.

According to Don, he received many promotions, awards and decorations during his very successful career in the Navy, but being selected as the Mosley winner was the highlight of it all!

Management Objectives

Don and Lou selected timber production and wildlife as their primary and secondary management objectives. Additionally, they manage for recreation, soil and water conserva-



Don and Lou East

The Easts also make an agreement with the nearby Servants in Faith and Technology training center to provide a forestry tour for each class of foreign students they host. These students are primarily from Latin America and Africa. The Creeks Farms are also a favorite place for the Clay and Randolph County Forestry Planning Committees to hold their landowner tours.

hands dirty during helping on the farm. She prefers fishing from her canoe and photographing the wide variety of wildlife and wildflowers on the property. Don's favorite recreational use of the farms are deer hunting, fishing and searching for Indian artifacts.

Retirement Home

After retiring from the Navy and moving

back to Clay County, the Easts had a difficult decision in selecting a site to build their retirement home. There were so many beautiful places on their farms with scenic creeks, ponds and lakes that the decision was very difficult. Since they both wanted to be isolated as far back "in the sticks" as possible, they finally selected a 100-acre tract of mature hardwoods that is surrounded by an Alabama Power game preserve. The tract is on the shore of Lake R.L. Harris (known by locals as Lake Wedowee).

The Alabama Power Company had an agreement with the federal government which stipulated that the surrounding several thousand acres of game preserve could never be developed and could only be managed for timber and wildlife. This protected site was the ideal place for the Easts since "civilization" could not encroach on them. They built their home on this remote tract in 1992 and named it Buck Ridge.

Their home site is shared with a diversity of wildlife. Animals sharing Buck Ridge with the couple are cougars, bobcats, deer, coyotes, red and gray foxes, raccoons, opossums, armadillos, Canada geese, loons, ospreys, turkeys, eagles, hawks, owls and many other species. The couple has an understanding with the animals that they can have half of the large garden they plant each year, but the animals must leave the other half for them.

The Easts have three grown children. Don's son, Brant, is a career man in the U.S. Navy and his daughter, Amy, lives in Georgia. Lou's son, Keith, works with a restaurant chain in Florida. While the ultimate fate of The Creeks Tree Farms is uncertain, Don and Lou insist that if they ever sell their timberlands it will be to someone that shares their passion for good stewardship. The Easts are convinced that the American Indians were right in their belief that no one could own Mother Earth. Instead, it was for all to use, but also for all to take care of and to respect.

"We don't really own the land," says Don. "We are just borrowing it for a short time from future generations and we are therefore obligated to leave it in better shape than we found it." The Easts are doing just that at Buck Ridge on The Creeks Tree Farms. 🌲



Clay County Manager Earl Smith talks with Lou and Don East about their property.

Over the years, the Easts have marketed more than 700 MBF of sawtimber and almost 6,000 cords of pulpwood from their land. They have used almost every type of management technique including clearcuts, seed tree cuts, shelterwood cuts, select cuts, deferred cuts, seed-in-place cuts, prescribed burning, chemical release, mechanical and chemical site preparation, mechanical and hand planting as well as the construction of forest roads, stream crossings, and firebreaks. With the exceptions of timber harvests and reforestation work, the couple does all of their own labor on the farms, including creating picnic sites, building their own bluebird boxes, building and maintaining nature trails, maintaining forest roads and wildlife food plots and doing supplemental wildlife plantings. With their 13 farms being scattered over three counties, it takes up "quite a bit of my time," says Don.

Lou certainly doesn't mind getting her



The abundant hardwoods on the East's TREASURE Forest provide beautiful fall color.

Alabama TREASURE Forest Association

Forming A Network

By **BOBBY DEAN**

Membership Services Coordinator, Alabama TREASURE Forest Association

PEOPLE from all walks of life are getting involved with the Alabama TREASURE Forest Association. The call to form county chapters has begun a great awakening in the hearts and minds of a broad cross-section of Alabamians. The membership of ATFA reflects an astonishing increase of nearly 70 percent in the past 12 months. The Association's growth has tripled the number of chapters to 18 approved and 19 that are in the process of formation.

I went looking for a window into the time that this association was formed and found reflections of where the ATFA began in earlier issues of this magazine. I found many inspiring words from former State Forester C.W. "Bill" Moody and a host of others. Their words helped give me a sense of where the Association has been and what the intentions were of those who were involved from the beginning.

One statement was from an article by Bibb County TREASURE Forest landowner Dan James. It described the sense of community we are building and the relationships we are enjoying. "Among the Association membership there is a special kind of fellowship and sharing of ideas and experiences that enhance an already solid relationship in stewardship." (*Alabama's TREASURED Forests*, Fall 1992, p.24)

I would like to thank each one of our members who volunteered and helped form or participated in county chapter meetings during the past year. Your leadership is instrumental in helping us build and maintain this organization. Many people now recognize the ATFA as the vehicle to build a network of landowners and concerned individuals who are all stakeholders in the future and well-being of Alabama's forests.

As I travel Alabama and attend ATFA meetings, I ask many of our members to plan their chapter goals and activities. I

listen to their responses, and the feedback I have been getting from them reflects the aspirations of this Association. I also feel their suggestions are closely aligned with the intentions of our earliest leaders.

Many members are concerned about education and ensuring that the next generation of Alabamians grows up with an understanding and appreciation of forests. Many want to reach the ear of every landowner with the TREASURE Forest stewardship message. Some want to inspire people to respect the land and have respect for the property of others.

Some want to encourage government leaders to make informed decisions regarding property rights, taxation, and other public policy. Another suggests getting to know county service providers and programs better. Still others want to share and receive information and instruction with technical experts and other members.

The underlying thread of all their goals is the fiber of our network that encourages responsible forest stewardship. That fiber is the TREASURE Forest concept of multiple-use management. The ATFA is now a vibrant growing network of empowered landowners and stakeholders reaching out to share their TREASURE Forest ideals and experiences.

Beginning this year the ATFA will introduce some tools and tutorials to assist our leaders in building and maintaining county chapters. It is vital that we keep the momentum of this organization going and growing. We will expand our leadership training to eight sessions that include the addition of four Advanced Leadership 2000 sessions. Some of the additional topics will include Parliamentary Procedures, Involving Elected Officials, The Importance of Gatekeepers, and Tools for County Chapter Meetings. These sessions will help enable us to encourage and empower more leaders to continue the great work

of this Association.

The ATFA is also launching its online network to foster communication and promote the Association. The Web site address <http://www.atfa.net> will connect you to the ATFA network. You will find information on ATFA membership types and a form that can be used to join the Association or renew your membership. There are contact lists of leaders by county as well as information on county chapter meetings and leadership sessions. You can download a template for county chapter letterhead or look at Virtual TREASURE Forest Tours and photographs of ATFA activities. All of the tools and materials on the web site are available by U.S. mail through our membership services office in Opelika.

ATFA Executive Director James Malone hired me in July 1999 and commissioned me to serve the members of the Alabama TREASURE Forest Association. I feel fortunate to have the opportunity to work for such a worthwhile organization. Since that time I have strived to meet the needs of our membership as we continue to grow together. I have observed that in an ATFA county chapter meeting you find a sense of community and willingness to share that you will find nowhere else.

The more ATFA members I meet the more I am firmly convinced that our people are our greatest natural resource. ♣

If you would like more information on the Alabama TREASURE Forest Association, please contact:

Bobby Dean
ATFA Membership Services
2405 Sherwood Drive
Opelika, AL 36801
Voice: (334) 704-0708
Fax: (334) 704-0455
Email: deanrob@mail.auburn.edu
Web Site: <http://www.atfa.net>

Harvesting with a Purpose

Part 1: Intermediate Harvests

By **BILLY RYE, R.F.**

Forest Management Specialists, Florence, Alabama



Before harvesting trees on your property, consult a professional forester for advice. A written management plan prepared by a forester is a useful tool in directing harvesting efforts.



A row thinning removes trees at fixed intervals throughout the stand.

UPON THE PURCHASE or inheritance of property, many landowners contact our firm and ask: “How can I change my forestland?” After consulting with these landowners, we recommend that they consider why their forestland should be changed. Since no other management practice impacts forestland more than harvesting, a landowner or forest manager should first have a purpose before harvesting is initiated. A written forest management plan prepared by a competent resource professional, with the landowner’s best interest in mind, is a useful tool in directing harvesting efforts.

The harvesting of trees, individually or in groups, is the primary method for change used by landowners. While there are many types of harvesting available, most fall into one of the following categories: (1) Intermediate, or those applied to an existing stand, and (2) Final, or those used to remove an existing stand and prepare the way for the stand to follow. In this article, each type of harvest will be examined and the benefits to non-industrial private landowners will be discussed.

There are basically three types of inter-

mediate harvesting: (1) Thinning, (2) Improvement, and (3) Salvage/Sanitation.

Thinning

Thinning is by far the most utilized intermediate harvest employed by non-industrial private landowners. It is used primarily to stimulate growth of the final crop trees and to provide intermediate income. To accomplish this, several thinning methods have been created: (1) Low, (2) Crown, (3) Selection, (4) Geometric, and (5) Combination.

Low—The low thinning method is the oldest method of thinning used in forest management. It is also known as “thin-

ning from below,” “ordinary,” or the “German method” (as this is where the method originated). Under this method, trees are removed from the lower crown and diameter classes (i.e. the smaller trees). Trees that are overtopped or that are classified as intermediate are removed. This is the only method of thinning that can be done without risk of reducing the gross production of wood, as no potential crop trees are removed. However, since removals are concentrated in the smaller trees, those removed in the first thinning may not be of commercial size. Therefore, the first thinning may actually cost the landowner money



A loblolly pine stand before and after thinning. A thinning such as this stimulates growth of remaining trees and provides income to the landowner.

using this method. For this reason, this type of method is most applicable in stands where all trees present are of merchantable size.

Crown—The crown thinning method was created in France to overcome some of the limitations of the Low thinning method. Under this method, trees are removed from the middle and upper portion of the crown and diameter classes rather than from the lower end. This method may also be referred to as “thinning from above” or “high thinning.” Under this method, trees are removed from the upper crown classes to open up the canopy and favor development of the most promising trees. While most of the trees cut are classified as co-dominant, any other trees that interfere with the development of potential crop trees may also be removed (even if they are dominant). This method differs from the low thin in that most of the trees removed are from the upper portion of the crown classes while most of the intermediate and overtopped trees are left. The advantage of this type of thin is that the immediate returns are greater and the growth of the final crop trees is stimulated more than with the low thin. The disadvantage is obvious; a landowner may accidentally over-cut the dominants and reduce future growth!

Selection—Under this thinning method, the dominants, or larger trees are removed. This method varies greatly from the preceding two methods primarily by the fact that only the dominants are removed. This method of thinning may be referred to as “thinning of dominants” and is rarely used. The only practical application of the Selection method is in areas where the overstory (larger trees) is composed primarily of poorly formed trees or of an undesirable species. This type of thinning is best carried out early in the life of the stand and should later be replaced by other thinning methods.

Geometric—This method is so named because the trees to be cut or retained are selected based on some predetermined spacing. No regard is given to a tree’s position in the canopy or size class. Most foresters refer to this method as “mechanical thinning” due to the mode of choice, not the use of machinery. This type of thinning is advantageous in treating young stands that are densely crowded and have not been previously thinned.

It is also advantageous to the use of large, cumbersome equipment often used for thinning purposes. Geometric thinning is typically applied only in the first thinning or for pre-commercial thins. Under the “spacing thinning” method, trees at fixed intervals are chosen for retention and all others are cut. A “row thinning” occurs when trees are cut out in lines or narrow strips at fixed intervals throughout the stand. The advantage of this type of thinning is that it takes less training and supervision to implement. The primary disadvantage is that potential crop trees will be removed in areas designated to be harvested and less desirable trees will often be retained in areas that are not cut.

Combination—Typically in the South, a combination of thinning methods will be utilized during the life of a stand. For Southern yellow pine plantations, the first thinning often consists of a combination “row thin” and “crown thin.” The second thin tends to be a low thin. If there is a third thin, it is usually either a low thin or combination low thin and spacing thin. The type of thin that is best for an individual landowner is dependent upon the objectives, the age and density of the timber present, and the potential productivity of the site and timber. As with a management plan, advice should be sought from a competent resource professional with the landowner’s best interest in mind before thinning is initiated.

Improvement Harvest

This type of intermediate harvest is designed to free good trees, which have grown beyond the sapling stage, from the competition of the older, less desirable overstory trees. Improvement cuttings are most often applied to stands of irregular age distribution and are often conducted simultaneously with a true thin or reproduction harvest. While they are rare in the Southeastern U.S., they are sometimes used to rehabilitate a stand in an effort to make it more productive.

Salvage/Sanitation Harvest

Salvage and sanitation harvests are made for the primary purpose of removing trees that have been or are in imminent danger of being killed or damaged by injurious agents such as pests. Using the salvage harvest, a landowner attempts to salvage the value of trees that would

be lost. Therefore, the trees removed are of commercial size and the landowner salvages at least a portion of their value. Under a sanitation cutting, trees are eliminated that have been attacked or are in imminent danger of being attacked in an effort to prevent pests from spreading to other trees. A sanitation harvest differs from a salvage harvest primarily in that it is not necessarily confined to the removal of merchantable trees.

Conclusion

Intermediate harvesting can be a valuable tool to help landowners achieve their forest management objectives. Properly applied, thinnings, improvement harvests, and salvage/sanitation harvests can be used to improve existing forest stands. As with most forest management activities, the advice of a reputable resource professional should be sought before harvesting efforts are initiated. ♣

Reference

Smith, David M., **The Practice of Silviculture: 8th Edition.** New York: John Wiley & Sons, 1986.

CROWN CLASSIFICATIONS

Dominant — trees with crowns extending above the general level of crown cover and receiving full light from above and partly from the side; larger than the average trees in the stand, and with crowns well developed but possibly somewhat crowded on the sides.

Co-dominant — trees with crowns forming the general level of the crown cover and receiving full light from above but comparatively little from the sides; usually with medium-sized crowns more or less crowded on the sides.

Intermediate — trees shorter than those in the two preceding classes but with crowns extending into the crown cover formed by dominants and co-dominants; receiving a little direct light from above but none from the sides; usually with small crowns considerably crowded on the sides.

Suppressed — trees with small, thin crowns entirely below the general level of the crown cover, receiving virtually no direct light either from above or from the sides.

100 Years of the National Cooperative Soil Survey — and Still Learning

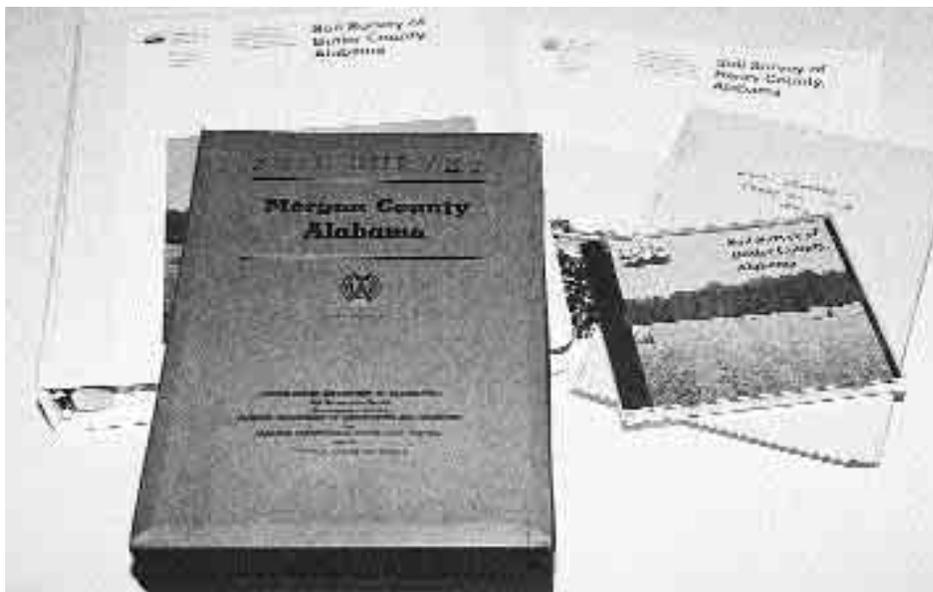
By **JULIE A. BEST**

USDA-Natural Resources Conservation Service, Auburn, Alabama

THINK of the abundance of produce at the supermarket, the interstate highways that network our country, the crystal clear stream that flows through the mountains, and the comfortable dwellings that we call home. What do these things have in common? Soil. Soil is the foundation of it all. It's the carpet of our world, the seedbed for our food and fiber, the support for our buildings and roads, the reservoir of our water sources, and the filter for our waste. The United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS) just observed its Centennial year. In cooperation with state and local partners, the USDA-NRCS has been interpreting soil for 100 years now. The data derived from this study is recorded in a document called a soil survey.

The soil survey is perhaps the largest and most valuable natural resource database in the world. It is a scientific inventory of soil resources, including soil maps, data about the physical and chemical properties of soils, and information on the potentials and limitations of each soil. Soils respond differently to various types of management.

The soil survey serves as the basis for applying what we have learned through research and experience to specific tracts of land. Soil data are used for many reasons, primarily to ensure that the intended use of the land fits the soil. Farmers, ranchers, and foresters use the data to predict production capabilities, to develop conservation plans, to serve as tools for wildlife management, and to help identify wetlands. Engineers use the data to analyze the soil's response for construction, for waste disposal, and for pollution control.



Soil survey data has been presented in various formats through the years. The first surveys were small booklets; modern soil survey data is available on CD-ROM.

History

The soil survey program, carried out by the National Cooperative Soil Survey, is a nationwide partnership of federal, regional, state, and local agencies and institutions. USDA-NRCS is the leader of the federal part of the partnership.

The soil survey was largely the brainchild of one man — Milton Whitney. Associated with state agricultural experiment stations in Connecticut, North Carolina, South Carolina, and Maryland, he became the first chief of the Division of Agricultural Soils at the U.S. Department of Agriculture in 1894. He developed the idea of mapping soil characteristics as a means of promoting agricultural development. Hugh Hammond Bennett, the father of soil conservation, made his early discoveries of the effects of sheet erosion in 1905 when he was a

young soil scientist mapping soils in Louis County, Virginia. He began a crusade to explain and reduce soil erosion that resulted in a national program to protect natural resources, first in USDA's Soil Conservation Service, later renamed the Natural Resources Conservation Service.

The first soil surveys were mapped to find areas for the expansion of agriculture. The surveys in the eastern United States were started to see if certain imported varieties of tobacco could be grown. The western surveys were in areas with very dry climates and were mapped to see if the soil was suitable for food production under irrigation. The first soil survey field operations began in the summer of 1899. The soil survey parties worked in four sites: Pecos Valley, New Mexico; Salt Lake Valley, Utah;



The screw auger was the primary tool used by the soil scientist in the early days. Texturing by hand was one of the first “soil tests” and continues to be a tool for the soil scientist today.

Cecil County, Maryland; and the Connecticut Valley of Massachusetts and Connecticut.

The first soil survey in Alabama was completed in 1902 for Perry County. Since that time, approximately 93 percent of the private land in Alabama has been mapped.

Method

Fieldwork for soil scientists has changed little through the years. They study the land in a survey area, its vegetation, and its features. They identify the different kinds of soil by examining the soil layers, usually to a depth of 6 feet. The soil scientist determines the slope, possible erosion hazards, the color, the acidity or alkalinity, and the proportions of sand, silt, clay, and organic matter. They classify the soils according to a national system and outline each kind of soil on an aerial photograph before they leave the field.

Soil Survey Update

Nationwide, soil survey mapping is complete on more than 90 percent of the private land, 48 percent of Indian lands, and 47 percent of public lands. Overall,

about 78 percent of the total land area of the United States has some type of completed soil survey. However, only about 59 percent of this mapping adequately supports modern land-use decisions. The other 41 percent is in need of updating.

Work is underway to provide soil surveys in more usable formats. Modern soil surveys are available on CD-ROM and on the Internet. In addition, NRCS and its partners have embarked on an effort to digitize soil surveys. With digitizing, soils information can be used with other geospatial data in overlays to visualize the landscape and natural resources information in relation to each other.

A Time to Reflect

The Centennial of the Soil Survey Program provided an opportunity to remind us of the importance of soil, to reflect on what we have learned about soil, and to look forward to what may be available in the future. Food, fiber, and foundations — the common denominator is soil. USDA-NRCS has been interpreting soil for 100 years, and the soil scientist is still learning. The soil scientist is ever looking for new ways to tell the story. 🏡



A horse patiently waits while an early soil scientist takes a soil sample.

HELENE MOSLEY MEMORIAL TREASURE FOREST AWARD RECIPIENTS

Year	District I	District II	District III
1978	Boyd Batchelor* Pickens County	Jere A. Henderson Pike County	F. Mooney Nalty Escambia County
1979	Mildred Owens* Etowah County	Robert L. Trotter Pike County	Frank M. Stewart Monroe County
1980	Billy Ogden Lamar County	Russell Campbell* Cleburne County	Bealie Harrison Clarke County
1981	Harris M. Gordon* Shelby County	Robert L. Snyder Barbour County	M.H. Lee Pickens County
1982	Ralph McClendon Etowah County	John W. Rudd* Russell County	Blinn Sheffield Wilcox County
1983	Dorsey Taylor Marion County	Albert Rumph Bullock County	Bruce Owens* Dallas County
1984	Thurston Nix Marion County	Robert Sellers Pike County	J.R. Crosby* Baldwin County
1985	Floyd Clemons Jackson County	The James Hughes Family* Houston County	Vivian White Clarke County
1986	The Clyde Holcomb Family Marion County	H.C. Jordon Dale County	James Brothers Farm* Bibb County
1987	John & Dene Mathews Cherokee County	Ed McCullers* Elmore County	Ann Bedsole Monroe County
1988	William T. St. Clair, Sr. Jackson County	Dr. Hoyt A. Childs, Sr. Geneva County	Ozier D. & Dozier E. Slay* Baldwin County
1989	Sim T. Wright Fayette County	Jimmy O. King Pike County	J. Gary Fortenberry* Choctaw County
1990	Jeff McCollum Colbert County	Joel & Paula Neighbors* Coosa County	W.D. Suddeth* Hale County
1991	R.B. Brown DeKalb County	McCallister Farms* Houston County	Sturdy Oak Farms Escambia County
1992	Seth Lowe Lauderdale County	White Oak Plantation Macon County	J.B. Dollar* Tuscaloosa County
1993	Sizemore and Sizemore Farms Lamar County	Albert and Thelma Schmidt Elmore County	W.A. Stacey and Son* Conecuh County
1994	William C. Snoddy Winston County	McConnell Family* Coosa County	Wilco Properties, Ltd. Monroe County
1995	Marvin Whited Blount County	Bolling P. Starke Bullock County	James & Joan Malone* Mobile County

*State Winner (tie in 1990)

Beginning in 1996, four regional recipients were chosen, with no state winner designated.

Year	NW Region	NE Region	SW Region	SE Region
1996	Dr. Emory Cunningham Shelby County	Horten & Gayle Adcox Coosa County	J.C. Harper, Sr. Estate Wilcox County	W.L. Franklin, N.W. Phillips Geneva County
1997	McGiffert Farm Tuscaloosa County	Jack McQuinn Jackson County	Robert & Carolyn Brown Washington County	Walter B. King Crenshaw County
1998	Pine Lake-Tom Richey Fayette County	James T. Hendon Randolph County	David & Ruth Ball Clarke County	Johnny & Beverly Taylor Pike County
1999	Dr. Robert Mathews Colbert County	Mr. & Mrs. Don East Clay County	Mr. & Mrs. Don Stinson Conecuh County	Ms. Jane James & Ms. Maurite Scanlan, Bullock County

HISTORY OF THE Helene Mosley Memorial TREASURE Forest Award

By **PAT BUTLER**

Alabama TREASURE Forest Landowners Association

THE TREASURE Forest Program has been tremendously successful in Alabama since its inception in 1975. In fact, it was so successful that it was used as a model for the National Stewardship Program established by the U.S. Congress in 1990. Growth of the TREASURE Forest Program in Alabama is partly due to the popularity of the Helene Mosley Memorial TREASURE Forest Awards Program. This awards program recognizes outstanding certified TREASURE Forest landowners.

It is a privilege and an honor for a landowner to receive TREASURE Forest

certification. It represents that the landowner is managing their forestland as a good steward and that he or she is practicing multiple-use management. Being nominated for the Helene Mosley Memorial TREASURE Forest Award is a greater honor. When TREASURE Forest landowners are nominated for the Helene Mosley Award, they are being recognized as "striving for excellence" in the TREASURE Forest concept by other landowners and government agency personnel. However, selection as a winner is the ultimate award! Winners of this prestigious award represent the cream of the crop in

certified TREASURE Forest landowners. Many thanks are owed to W. Kelly Mosley, the founder of the Helene Mosley Memorial TREASURE Forest Award Program. W. Kelly Mosley is responsible for many awards programs in Alabama. However, the Helene Mosley Award is extra special to forest landowners in Alabama.

Landowner Selection

Selection for outstanding TREASURE Forest landowners begins each year when applicants are nominated by individuals, county forestry planning com-

1999 Helene Mosley Memorial TREASURE Forest Award Winners



Lou and Don East
Northeast Region



Jane James and Maurite Scanlan
Southeast Region



Robert and Leta Mathews
Northwest Region



Donald and Grace Stinson
Southwest Region

mittees or government agencies. Applicants are then reviewed by one of four regional TREASURE Forest certification committees appointed by the Alabama Forestry Planning Committee. After an often difficult screening process of excellent applicants, each regional certification committee visits the top two nominees in their region. They then make the final selection for winner of the award in their region. Criteria used to select the recipients are the same as those used for the TREASURE Forest Program. In addition, the criteria of educational value and the “use” or “sharing” of the TREASURE Forest is considered. Winners from each of the four Alabama Forestry Commission regions are invited to the annual Alabama Landowner and TREASURE Forest Conference in the fall as special guests. There they are honored with a video about their TREASURE Forest that highlights extraordinary accomplishments. They are also presented with a \$500 stipend, a framed limited-edition reproduction print and a plaque.

Managing Pineland

This prestigious award program started in 1978. According to Henry Harrison, retired District Conservationist with the Soil Conservation Service (now the Natural Resources Conservation Service) in Marengo County, W. Kelly Mosley started the award program in honor and memory of his first wife, Helene Mosley. Henry Harrison helped W. Kelly Mosley in designing his first conservation plan for his farm in Marengo County. Mosley’s farm, now known as Pineland, soon became the first certified TREASURE Forest in the state in 1975.

There were many people who helped W. Kelly Mosley achieve his accomplishments on Pineland. Mosley was retired and living in Atlanta, Georgia, when he inherited Pineland and during its transformation into a TREASURE Forest. Henry Harrison said he was contacted by Mosley after he was encouraged by a fellow Auburn University alumni friend, A. D. Holmes, Jr., to develop a conservation plan for his newly inherited farm in Marengo County. Holmes was district supervisor with the Marengo County Soil and Water Conservation District at that time. Henry Harrison met with Mosley and visited the farm. They planned the

construction of fish ponds, enhancement of wildlife with establishment of food plots, establishment of access roads, and timber management.

In his conservation plan Mosley decided to clearcut and thin some of the timber on the farm. He contacted A.W. (Buck) Compton Jr., another member of the Auburn University Alumni Association. They worked out a “cut and haul” contract for clearcutting and thinning some of the timber on the farm. Compton is still helping Mosley market timber today. Joe Watts, forest ranger with the Alabama Forestry Commission, also assisted Mosley in timber management and establishing firelanes on his property for fire control. After the conservation plan was complete and progress had been made on the Mosley farm, Larkin Wade with the Alabama Cooperative Extension System, along with Henry Harrison, requested to use the Mosley farm as a Demonstration Forest. Soon Pineland became a Demonstration Forest. Mosley believed in educating other forest landowners in good stewardship practices and multiple use of the forest. He enjoyed sharing his “treasured” forestland with others. He often brought friends to Pineland for hunting and fishing.

Award History

In 1977 W. Kelly Mosley decided to establish an award program to promote forestry in Alabama. He provided \$2,500 and took his ideas to the Alabama Forestry Planning Committee. Soon the Helene Mosley award program became a reality in memory of his first wife, Helene.

Henry Harrison believes Mosley was also inspired to establish the Helene Mosley Award due to Mosley having received the “Goodyear Outstanding District Cooperator Award” for Marengo County through the Soil and Water Conservation District. As a result of that award, Mosley received a trip to Phoenix, Arizona, to the Goodyear Demonstration Farm. Henry Harrison believes W. Kelly Mosley wanted the state of Alabama to have a similar recognition program of excellence in forest management and stewardship. Mosley had received help and support from many agencies and individuals in his quest for good stewardship on his farm.

Henry Harrison thinks W. Kelly Mosley wanted others to have a chance at a higher level of recognition and reward for their work beyond the basic stewardship goals of the TREASURE Forest Program.

Today, many TREASURE Forest landowners strive for the same level of excellence in forest management and stewardship promoted by the Helene Mosley Memorial TREASURE Forest Award Program. Past winners of this prestigious award set a wonderful example for others to follow. Helene Mosley Award winners love their land with a strong passion. They are highly motivated to teach others what they have learned as TREASURE Forest landowners. They are willing to share their knowledge, time and forestland to help others understand the importance of good stewardship and the benefits of multiple use management of the forest. They recognize that education is the key to tomorrow’s future for the freedoms private forest landowners enjoy in Alabama today. Through education of other private forest landowners and the public, TREASURE Forest landowners can show they are responsible stewards of this great land. For many TREASURE Forest landowners their mission is a spiritual one. To quote a favorite saying of James Malone, Executive Director of the Alabama TREASURE Forest Association and a past Helene Mosley Award winner, as TREASURE Forest landowners, we are “Taking the land God has loaned us and making Him proud He did.” Thank you, W. Kelly Mosley and the Alabama Forestry Planning Committee, for making an even higher level of recognition possible through the Helene Mosley Memorial TREASURE Forest Award program! 🙏

The author wishes to thank the following people for their cooperation and the information they provided for this article: Henry Harrison, retired District Conservationist with NRCS in Marengo County; Jerry Johnson, State Staff Forester with NRCS; Gary Fortenberry, President of the Alabama TREASURE Forest Association; John Richburg, Assistant State Conservationist for Field Operations, West Team, NRCS; Timothy C. Boyce, State Forester. The following publications were also used: Circular ANR-231, The Alabama Cooperative Extension Service; Minutes of the Alabama Forestry Planning Committee, July 12, 1977; and an article by Larkin Wade, Mosley Environmental Professor, Auburn University, on the W. Kelly Mosley Programs, Auburn University, 1992.

LANDOWNERS



LEGISLATIVE • ALERT



NATIONAL

By JAY JENSEN
Washington Office
National Association of State Foresters

BY THE TIME you read this, the first session of the 106th Congress will be over. As has become the norm in recent years, Congress has had difficulty in completing the 13 annual spending bills, or appropriations bills, that fund all federal discretionary programs in this country on time. This includes the Interior Appropriations bill which funds the USDA-Forest Service and provides the primary federal funding for State & Private Forestry (S&PF) programs.

The road for the Interior appropriations bill has been its usual rough and tumble ride, but the S&PF programs under the Forest Service weathered it fairly well. For the year, Congress is proposing to fund S&PF at a level of \$188 million, an impressive 10 percent increase over last year's level of \$171 million. This is particularly noteworthy considering the self-imposed tight spending caps developed back in 1997 to balance the budget and maintain the solvency of social security. Here's a look at what will likely be coming down the pipe in fiscal year 2000 for forest landowner assistance programs under State & Private Forestry, as well as some program background.

Forest Landowner Assistance Programs

There are three primary landowner assistance programs administered by the Forest Service and implemented by the state foresters: the Forest Stewardship

Program, the Stewardship Incentives Program and the Forestry Incentives Program. All three are likely to maintain their fiscal year 1999 funding levels into 2000.

The *Forest Stewardship Program* (FSP) is the backbone of the forest landowner assistance programs offered by the Forest Service. The program is designed to assist non-industrial private forest (NIPF) landowners more actively manage their forests and related resources. This includes keeping these lands in a productive and healthy condition so economic and environmental benefits can be had for present and future generations. This translates to on-the-ground action through technical assistance and development of forest management plans.

The compliment to the FSP is the *Stewardship Incentives Program* (SIP). SIP provides NIPF landowners financial assistance to implement many of the management activities laid out in an FSP management plan. The cost-share program provides up to 75 percent of the costs for such activities as reforestation, afforestation, forest improvement, and a myriad of wetland and riparian area, recreation, and fish and wildlife habitat protection improvements.

For FY 2000, the FSP is slated to receive a small \$600,000 increase that is mostly an inflationary adjustment, but is proof of Congress' dedication to the valued program. This brings the total funding level for FSP to \$29.430 million.

Unfortunately, for the second straight year, the SIP has been zeroed out, meaning that no funding will be available.

This lack of support has surprised a few and has led to early discussions of revamping the program and/or developing a new federal cost-share assistance program that would meet the changing needs of the NIPF landowner. The state foresters plan on playing a significant role in any future program and will remain engaged in the policy development.

The other primary landowner assistance program is the *Forestry Incentives Program* (FIP). The FIP is jointly administered by the USDA-Forest Service and the USDA-Natural Resources Conservation Service, and implemented at the ground level by the state foresters. This program is primarily a cost-share program, but unlike the SIP, monies are directed at assisting NIPF landowners defray the costs of making long-term investments in tree planting, forest stand improvement, and site preparation for timber operations.

The FIP, very popular in the southern states, will stay flat for fiscal year 2000 at \$6.325 million. At first glance this looks to be a decrease from last year's level of \$16.325 million, but \$10 million of last year's appropriation was marked as emergency spending in response to terrible drought conditions in 1998 that resulted in tree planting failures across much of the South.

The other program of interest to private forest landowners also did well. Programs to fund rural firefighting received modest increases. These programs help the Forestry Commission to work with—and equip—rural volunteer fire departments that are responsible for firefighting on most of Alabama's private forestlands. Forest health protection, which includes federal help to the states to detect and suppress forest pests such as the Southern pine beetle, also received substantial funding increases.

Overall, forest landowner assistance programs fared quite well through the fiscal year 2000 appropriations process. Numbers were not quite as high as NASF would have liked, but support for basic S&PF programs does appear to be growing in Congress right now and NASF will be working hard to ensure that forest landowners get the assistance they need. ♣

E.A. Hauss Nursery Seedlings

The Alabama Forestry Commission's E.A. Hauss Nursery in Atmore is now taking orders for seedlings for the 2000-2001 planting season. Pines, hardwoods and wildlife and habitat foods are available. For additional information call 334-368-4854.

Species Available

Pines

Loblolly Pine

Pinus taeda

The principal commercial Southern pine; a large, resinous and fragrant tree with rounded crown of spreading branches. Reaches heights of 80-100 feet. Loblolly pine is native in 15 Southeastern states. Among the fastest growing Southern pines, it is extensively cultivated in forest plantations for pulpwood and lumber. One of the meanings of the word loblolly is "mud-puddle," where these pines often grow.



Habitat: From deep, poorly drained flood plains to well-drained slopes of rolling, hilly uplands. Forms pure stands, often on abandoned farmland.

Longleaf Pine

Pinus palustris

Large tree with the longest needles and largest cones of any Eastern pine, and an open, irregular crown of a few spreading branches; one row added each year. Attains heights of 80-100 feet. Longleaf pine is a leading world producer of naval stores. The trees are tapped for turpentine and resin and then logged for construction lumber, poles and pilings, and pulpwood. The seedlings pass through a "grass" stage for a few years, in which the stem grows in thickness rather than height and the taproot develops rapidly. Later, the elongating, unbranched stem produces very long needles.



Habitat: Well-drained sandy soils of flatlands and sandhills.

Slash Pine

Pinus elliotti

Large tree with narrow, regular, pointed



crown of horizontal branches and needles. Reaches heights of 60-100 feet. An important species for both lumber and naval stores and one of the fastest growing Southern pines. Its beauty makes it popular as a shade and ornamental tree. *Habitat:* Low areas such as pond margins, flatwoods, swamps or "slashes," including poorly drained sites.

Pine Prices

Loblolly

Seed Source	Price Per 500	1,000
Coastal 1st Generation	\$23	\$35
Coastal 1.5 Generation	\$25	\$39
Piedmont 1st Generation	\$23	\$35
Piedmont 2nd Generation	\$28	\$44

Longleaf

Seed Source	Price Per 500	1,000
1st Generation	\$45	\$70

Slash

Seed Source	Price Per 500	1,000
1st Generation	\$23	\$35
1.5 Generation	\$25	\$39

1st Generation (cycle)-These seedlings are grown from seed collected from our grafted orchards. These orchards are established using selected high performance parent trees from variable natural stands. These seedlings are often referred to as "improved" pine seedlings.

1.5 Generation (cycle)-These seedlings are grown from seed collected from our grafted orchards which have been established using the best performing parents from our 1st cycle orchards.

2nd Generation (cycle)-These seedlings are grown from seed collected from our grafted orchards using the best performing crosses and/or parents from our first cycle orchards based on progeny test data.

HARDWOODS

White Oak *Quercus alba*

Tall, beautifully shaped tree with grayish-

white bark. Leaves are bright green above, whitish or gray-green beneath; turning red or brown in fall, often remaining attached in winter. Usually reaches a height of 60-80 feet. The most important lumber tree of the white oak group, its high-grade wood is useful for all purposes. *Habitat:* Tolerant of many soils: sandy moist bottomlands, rich upland stony ridges; prefers moist soils.



Yellow or Tulip Poplar

Liriodendron tulipifera

One of the tallest and most beautiful Eastern hardwoods, with a long, straight trunk, a narrow crown that spreads with age, and large showy flowers resembling tulips or lilies. Reaches a height of 80-120 feet. Yellow fall color. One of the chief commercial hardwoods, yellow poplar is used for furniture, crates, toys, musical instruments, and pulpwood.



Habitat: Moist, well-drained soils, especially valleys and slopes.

Nuttall Oak

Quercus nuttallii

Tree with swollen base and open crown of spreading to horizontal or slightly drooping branches. Important red oak species for wildlife and hardwood production. Leaves turn brown in fall and shed gradually in early winter. Achieves height of 60-100 feet. Not distinguished as a species until 1927, when it was named for Thomas Nuttall, British-American botanist and ornithologist. The foliage resembles pin oak.

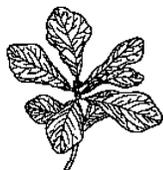


Habitat: Wet, poorly drained clay soils of flood plains.

Water Oak

Quercus nigra

Tree with rounded crown of slender branches, and fine textured foliage of small leaves. Reaches a height of 50-100 feet at maturity. A handsome, rapid growing shade tree in the Southeast; however, water oak is a short-lived member of the red oak group. *Habitat:* Moist or wet soils of lowlands, including flood plains or bottomlands of streams and borders of swamps; also moist uplands, often found with sweetgum.



Shumard Oak

Quercus shumardii

Large tree with straight axis and broad rounded, open crown. Reaches height of 60-125 feet. Leaves turn yellow, red and brown in the fall. Important timber tree; a handsome shade tree. A member of the red oak group. *Habitat:* Moist, well-drained soils including flood plains along streams; also on dry ridges and limestone hills.



Green Ash

Fraxinus pennsylvanica

Fast growing, straight tree; excellent timber tree; ideal for producing quick shade. Very hardy, ideal tree to plant along roads and streets or in landscape. Yellow fall color. Reaches height of 60 feet. This ash is the most widespread native ash. One of the most successful hardwoods in the Great Plains shelter belts. Hardy, fast-growing green ash is also planted on spoil banks after strip mining, as well as for shade. *Habitat:* Low rich moist soil near banks of streams and lakes.



Hardwood Prices

\$21 per 100

\$185 per 1,000

Species: Shumard Oak, Nuttall Oak, Yellow Poplar, Green Ash, White Oak, Water Oak, Cherrybark Oak

WILDLIFE FOOD AND HABITAT

Native Plum

Prunus spp.

Wildlife Uses: Deer, turkey, quail eat fruit. Plum thickets make excellent escape cover for rabbits, quail & other small animals. Also, nesting habitat for a variety of song birds. *Mature Height:* 16 feet. *Fruit Bearing Age:* 3-5 yrs., annual. *Fruit Information:* Flowers March-April. Red or yellow 1/4" to 1/2" fruit disperses May-July. *Planting tips:* Fruit production: 8-10 ft. apart; To form thickets: 50 seedlings, 3 ft. apart. Prefer open areas in full sun.



Overcup Oak

Quercus lyrata

A member of the white oak group. *Wildlife Uses:* Acorns utilized by deer, turkey, squirrel, & other animals that eat hard mast. Usually found in wet, swampy areas; therefore, provides food for ducks also. *Mature Height:* 80 feet. *Fruit Bearing Age:* 20-25 yrs., acorns produced every 3-4 yrs. *Fruit Information:* Medium-sized acorns *Planting tips:* 25 ft. apart. Plant in wet areas, but not areas covered by water. Will withstand occasional flooding. Tolerates some shade, but does best in direct sunlight.



Southern Crab-Apple

Malus augustifolia

Wildlife Uses: A variety that includes deer and turkey. Planted close together they provide thickets for cover. *Mature Height:* 20-30 feet. *Fruit Bearing Age:* 3-5 years, annual. *Fruit information:* 3/4"-1 1/2" yellowish-green fruit. *Planting tips:* Borders and fence rows: 6-9 ft. apart; To form thickets: 50 seedlings, 3-4 ft. apart. Prefers rich, moist soil in direct sun. Don't plant near trees of the Juniper family, as crab apples are susceptible to apple-cedar rust.



Autumn Olive

Elaeagnus umbellata

A shrub, sometimes planted as an ornamental. Makes an excellent border or hedge around food plots. *Wildlife Uses:* Quail, turkey, & song birds eat fruit. Close planting provides escape cover for small animals. *Mature Height:* 12 feet. *Fruit Bearing Age:* 3-4 years, annual. *Fruit Information:* Produces a large number of pink to red berries that ripen & fall from Sept.-Nov. *Planting tips:* Fruit production: 10 ft. apart in open areas exposed to sunlight. Escape cover: 4-6 ft apart.



Flowering Dogwood

Cornus florida

A favorite tree in the Southeast, used extensively for ornamental purposes as well as for wildlife food. *Wildlife Uses:* Berries are eaten by quail, turkey, song birds, squirrels, etc. *Mature Height:* 20-40 feet. *Fruit Bearing Age:* 4-6 yrs. Every 1-2 yrs. *Fruit Information:* Red berries 1/8"-1/4"; ripen Oct.-Nov. *Planting tips:* Border: 10 ft. apart. Plant randomly to increase diversity in older pine stands. Does well in partial shade but need some sunlight. Prefers moist, rich soil, but will grow on a variety of sites.



Eastern Redbud

Cercis canadensis

A native shrub often planted for ornamental purposes. Produces brilliant pink to purple blooms March-May. *Wildlife Uses:* Seeds eaten by quail and a variety of other birds. Deer browse the leaves. *Mature Height:* 20-40 ft. *Fruit Bearing Age:* 5 yrs., biennial. *Fruit Information:* Seed formed in pods that ripen in early fall and disperse during late fall to early winter. *Planting tips:* Tolerates partial shade. Does best in moist, rich soil. Often found in association with dogwood.



Sawtooth Oak

Quercus acutissima

Wildlife Uses: Deer, turkey, squirrel, and other animals that use hard mast. *Mature Height:* 50 ft. *Fruit Bearing Age:* 5-6 yrs., annual. *Fruit Information:* Acorns up to 1 1/4". About 40-80 acorns/lb. Nuts mature Aug.-Oct.



Planting tips: Needs direct sunlight. Plant as a border or as a grove in green field food plots. To form dense areas of escape cover plant 8 ft. apart.

Bicolor Lespedeza

Lespedeza bicolor

Deer browse this species heavily. *Wildlife Uses:* Food/cover for bobwhite quail, but seed also eaten by a variety of birds.



Mature Height: 6-8 ft., multiple branches from the base. *Fruit Bearing Age:* 1-2 yrs., annual. *Fruit Information:* Small seeds mature & drop Sept.-Oct. *Planting tips:* 2 x 3 foot spacing in plots up to an acre. Plant in open field-like areas such as logging decks, skid trails or old fields that receive direct sunlight. Grows in a variety of soil conditions.

Native Pecan

Carya illinoensis

Native pecan is the preferred hard mast species in the hickory group.



Wildlife Uses: Deer, squirrel & others. *Mature Height:* Over 100 ft. *Fruit Bearing Age:* 15-20 years, annual. *Fruit Information:* Up to 500 lbs./yr. *Planting tips:* Maximum nut production: 25 ft. apart in full sunlight. Prefers rich, moist soil.

Thunbergii Lespedeza

Lespedeza thunbergii

Thunbergii is a Lespedeza species almost identical to bicolor. The primary difference: Thunbergii was developed to be more deer resistant. In areas with high deer populations, thunbergii is the recommended species. *Planting tips:* See planting tips for Bicolor Lespedeza.



Common Persimmon

Diospyros virginiana

Wildlife Uses: A variety that includes deer and turkey. *Mature Height:* 60 ft. *Fruit Bearing Age:* 10 yrs, biennial. *Fruit Information:* Up to 1 1/2" diameter, orange colored fruit; ripens & falls Sept.-Nov. *Planting tips:* Groups of 10-15 trees, 20 ft. apart. Classified as shade tolerant but needs partial sunlight. Prefers rich, somewhat moist soils, but will grow on a variety of sites. Multiple tree plantings are necessary for fruit production.



Wildlife Food and Habitat Prices

Lespedeza Prices

Thunbergii	\$26 per 500
Bi-Color	\$42 per 1,000

Package: \$12

Includes 25 seedlings of your choice (min. 5 per species)

Other Prices

\$40 per 100 (same species)
\$150 per 500 (min. 100 per species)
\$250 per 1,000 (min. 100 per species)

Species: Autumn Olive, Common Persimmon, Eastern Redbud, Native Plum, Southern Crab Apple, Flowering Dogwood, Sawtooth Oak, Native Pecan, Overcup Oak

ORDERING INFORMATION

Placing your order:

1. Select species and quantity desired.
2. Call 334-368-4854 for availability and to place your order.
3. You will receive an acknowledgment within 5-7 working days.

Paying for your order:

1. Upon receipt of your acknowledgment remit a 10% non-refundable deposit if your order is for more than 50,000 pines or more than 10,000 hardwoods.
2. Upon receipt of your acknowledgment remit full payment for all other orders.
3. For proper credit always note your customer ID number on your payment.
4. We accept checks and money orders payable to: Alabama Forestry Commission.

5. All payments/deposits are due within 30 days of the acknowledgment date.
6. Orders held by deposit must be paid in full prior to shipment or by January 1, 2001 (whichever occurs first).

Receiving your order:

Orders are available for Delivery during December, January and February only!

Hauss nursery pick-up—Schedule your delivery at least 2 weeks in advance by calling 334-368-4854.

UPS delivery—Select shipping date from the calendar enclosed with your acknowledgment and return with your payment.

Cooler delivery—Select the desired cooler location for pick-up. Schedule your delivery at least 2 weeks in advance by calling the number shown for that location.

Cooler Locations

Huntsville	256-774-4411
Florence	256-767-1414
Tuscaloosa	205-339-0929
Birmingham Area	256-734-0573
Montgomery Area	334-365-8333
Opelika	334-368-4854
Ozark	334-368-4854
Atmore	334-368-4854

Keep in Mind

- Wildlife plantings are an excellent way to promote one of Alabama's most valuable resources.
- The key to development and enhancement of wildlife habitat is increasing food and cover.
- Trees and shrubs benefit wildlife on a continuing basis without the time and expense of planting food plots every year.
- All seedlings listed are first quality, one-year-old (18" to 24" tall) bareroot nursery stock.
- Trees listed are native or well adapted species to the climate in Alabama and the Southeast. They are less susceptible to insect and disease attack than exotic species.
- Our staff is available to answer questions and make recommendations concerning wildlife plantings. Contact us about growing large quantities and species not listed. ♣

American Beech

By **KIM GILLILAND**, Editor

VERY few tree species retain a smooth bark surface with age. The American beech (*Fagus grandifolia*) is an exception. As a result, it is a popular tree for carving initials and dates by youngsters wishing to preserve a special time in their lives. The beech's smooth, light gray bark is a distinguishing characteristic of the tree, which is found all over the state, but more abundantly in the northern part of Alabama.



While the bark of the beech tree is aesthetically pleasing, its thinness makes the tree exceptionally vulnerable to fire, logging activity and sucking insects. In extremely low temperatures, frost cracks can appear on the bole.

The fruit of this tree, the beechnut, matures in autumn and is edible. Prickly burs split open into four parts and usually contain two nuts. Their small size makes harvesting for human consumption tedious, but they are readily consumed by wildlife including squirrels, raccoons and game birds. When dried and roasted, the nuts have been used as a substitute for coffee beans.

The flowers appear with the new leaves in spring. The leaves of the beech tree are alternate, have sharp-toothed edges and are 2 1/2 to 5 inches long and 1 to 3 inches wide, tapering to a point. They are dark green above and lighter green below, turning yellow and brown in the fall. Dead leaves stay attached to the tree during the winter, making it easily identifiable from a distance in a woodland setting.

The average height of a beech tree is 60 to 80 feet with a diameter of 1 to 3 feet. It is shade tolerant and grows in moist, rich soils of uplands and well-drained lowlands.

Of the eight species of beech worldwide, American beech is the only one found in the United States. Beech lumber is hard and difficult to work with power and hand tools, but it is used for furniture,



cabinets, flooring, fuelwood, tool handles and toys. Because beech wood gives off no taste or odor, it is frequently used for kitchenware.

The American beech is one of the longest-lived broad-leaved trees and can reach ages of 300-400 years. ♣

References

- Little, Elbert L. **The Audubon Society Field Guide to North American Trees, Eastern Region.** New York: Alfred A. Knopf, 1980.
- McClure, Paul. L. "Beech," **American Woodworker** #59, June 1997.
- Silvics of North America.** USDA-Forest Service Agriculture Handbook 654. 1990.
- York, Harlan H. **100 Forest Trees of Alabama, Second Edition.** 1995.

Why You Need a Forest Management Plan ...and Where to Get One

By TIM ALBRITTON

Forest Operations Specialist, Alabama Forestry Commission

FOREST landowners usually have a picture in their mind of what they would eventually like to see their property look like and what they want to receive from their forest. Some want their property to look like a park and want to enjoy recreational activities there. Others may want to attract game to hunt and enjoy. And still others may just want to reap the financial rewards that an intensely managed forest can provide.

The responsibilities of state and local governments may or may not correspond to a landowner's concerns. When you boil it all down, most landowners are interested in their own little part of the world: their "back forty." That's why each landowner needs a forest management plan that specifically addresses their concerns and objectives.

What many landowners may not realize, though, is that a management plan isn't just something they need to get

approved for a forestry cost-share program. **It's a tool that can help turn their "back forty" into that picture in their mind.**

A forest management plan written by an experienced professional forester can be like a road map guiding a landowner from where he or she is now to where he or she wants to be. It will take into consideration objectives and goals for the property and layout a detailed plan to help accomplish these goals. Sometimes goals and objectives change. The passing of time has a way of doing that to us. Goals set at age 55 may be drastically different from goals set at age 25. So management plans need to be reviewed from time to time. Most plans try to lay out activities for five to 10 years, even though the rotation length of a stand can vary from as short as 18 years to as long as 80 years.

Obtaining a Management Plan

Landowners who have never had a plan may wonder about how to obtain one. Several opportunities are available to landowners from government agencies, forest industry, and consulting foresters.

The Alabama Forestry Commission (AFC) has 93 professional foresters and offices in every county in the state. In fiscal year 1998-99, the Forestry Commission produced 278 TREASURE Forest plans involving 70,000 acres. A TREASURE Forest plan is based on the multiple-use concept and the landowner selects at least two objectives from which to manage their land. The management objective from which a landowner can choose are Timber Production, Wildlife, Recreation, Aesthetics, and Environmental Education.

Continued on page 21

tear and remove form

Do You Need a Written Management Plan for Your Property?

Complete the following form and return to:

Alabama Forestry Commission
Attn: Tim Albritton
P.O. Box 302550
Montgomery, AL 36130

You may also e-mail this information to:
AlbrittonT@forestry.state.al.us

Name: _____ Phone: _____

Address: _____

City, State, Zip: _____

County where your property is located: _____

Estimated total acres: _____ Estimated forested acres: _____

Management objectives for your property (circle the most appropriate answer)

Primary Objective: 1) Timber Productivity 2) Wildlife Management
 3) Recreation 4) Aesthetics
 5) Environmental Education

Secondary Objective: 1) Timber Productivity 2) Wildlife Management
 3) Recreation 4) Aesthetics
 5) Environmental Education

Continued from page 20

A TREASURE Forest Plan will have property information such as a legal description, stand table and a summary of the landowner's desires for the property. Each plan also has a set of maps such as an area map giving the general location and a property map detailing the boundaries, timber stands, roads, and other special areas. Each stand is described and management recommendations made based on the landowners objectives. Often other natural resource specialists, such as a wildlife biologist, are asked to assist in making specific recommendations.

As might be expected, the demand for TREASURE Forest plans in some counties exceeds the ability of the Alabama Forestry Commission to produce them. After the 1990 Farm Bill was passed, the Management Plan Contract Program (MPCP) was developed. This is where the Alabama Forestry Commission contracts with an approved registered forester to produce a plan for a landowner. The forester is paid a fee by the AFC based on the number of acres owned by the landowner. The AFC targets landowners with larger acreages that might otherwise significantly impact the ability of personnel to accomplish other agency missions.

Another source for landowners to consider is the many consultant foresters working throughout the state. The Association of Consulting Foresters currently has 26 members in Alabama with eight foresters listed in candidate status. The vast majority—approximately 70 percent—of the forestland in Alabama is owned by private non-industrial landowners. It is vitally important that these landowners receive the benefits that a management plan can offer. Society also benefits from well-managed forests, from the thousands of products derived from trees, the clean water forests provide, the wildlife that thrives in them, and the tremendous economic boost all of this brings to Alabama.

If you or someone you know owns forestland in Alabama and could benefit from a TREASURE Forest management plan, contact your local Alabama Forestry Commission office for assistance or complete the adjacent form and return it to the address listed. 📧

State Forester's Message

Continued from Page 2

"Next day early in the morning I embarked in a boat and proceeded to Mobile, along the banks of islands (near twenty miles) which lay in the middle of the river, between the Eastern and Western shores of the main: the banks of these low flat rich islands are well cultivated, having on them extensive farms and some good habitations, chiefly the property of French gentlemen, who reside in the city, as being more pleasant and healthy. Leaving these islands, we continued ten or twelve miles between the Eastern main and a chain of low grassy islands, too low and wet for cultivation: then crossed over the head of the bay, and arrived in town in the evening." (He is describing the Mobile Delta.)

"The man and his three sons are famous hunters. I was assured, from good authority, that the old gentleman, for his own part, kills three hundred deer annually, besides bears, tygers, and wolves."

"The males of the Cherokees, Muscogulges, Siminoles, Chickasaws, Chactaws, and confederate tribes of the Creeks, are tall, erect, and moderately robust; their limbs are well shaped, so as generally to form a perfect human figure; their feature regular, and countenance open, dignified and placid; yet the forehead and brow so formed, as to strike you instantly with heroism and bravery; the eye though rather small, yet active and full of fire; the iris always black, and the nose commonly inclining to the aquiline."

"Their countenance and actions exhibit an air of magnanimity, superiority and independence."

"Their complexion of a reddish brown of copper colour; their hair long, lank, coarse, and black as a raven, and reflecting like lustre at different exposures to the light."

"They marry only for a year's time, and, according to ancient custom, at the expiration of the year they renew the marriage: but there is seldom an instance of their separating after they have children. If it should so happen, the mother takes the children under her own protection, though the father is obliged to contribute towards their maintenance during their minority and the mother's widowhood."

"After the feast of the busk is over, and all the grain is ripe, the whole town again assemble, and every man carries off the fruits of his labour, from the part first allotted him, which he deposits in his own granary; which is individually his own. But previous to their carrying off their crops from the field, there is a large crib or granary, erected in the plantation, which is called the king's crib; and to this each family carries and deposits a certain quantity, according to his ability or inclination, or none at all if he so chooses: this in appearance seems a tribute or revenue to the mico; but in fact is designed for another purpose, i.e. that of a public treasury, supplied by a few and voluntary contributions, and to which every citizen has the right of free and equal access, when his own private stores are consumed; to serve as a surplus to fly to for succour; to assist neighbouring towns, whose crops may have failed; accommodate strangers, or travellers."

"Next morning entered the Tombigbe, and ascended that fine river."

*"Opposite this bluff, on the other side of the river, is a district of sawamp or low land, the richest I ever saw, or perhaps any where to be seen: as for the trees I shall forbear to describe them, because it would appear incredible; let it suffice to mention, that the Cypress, Ash, Platanus, Populus Liquidambar, and others, are by far the tallest, straightest, and every way the most enormous that I have seen or heard of. And as a proof of the extraordinary fertility of the soil, the reeds or canes (*Arundo gigantea*) grew here thirty or forty feet high, and as thick as a man's arm, or three or four inches in diameter."*

Excerpts taken from **Travels of William Bartram**, edited by Mark Van Doren, Dover Publications, Macy-Masius, publishers, 1928. 📖



Becoming a TREASURE Forest Landowner

ALABAMA has approximately 22 million acres of forestland. We all depend on the products our forests provide. These same forests also furnish habitat for wildlife, clean the air, purify water, protect valuable topsoil, and provide scenic beauty and recreational opportunities.

Recognizing the importance of Alabama's forests and their multiple resources, the Alabama Forestry Planning Committee, made up of forestry and natural resource agencies and groups in the state, initiated the TREASURE Forest Program in 1974. TREASURE is an acronym that stands for Timber, Recreation, Environment, Aesthetics, for a Sustained Usable REsource.

TREASURE Forest is a voluntary program that seeks to promote sound and sustainable, multiple-use forest management. This type of management encourages landowners to use their forests wisely to meet their own needs while protecting and enhancing the environment. The TREASURE Forest Program promotes this management ethic through two avenues: education and recognition. Education is provided through information and on-the-ground technical assistance from the member agencies and groups of the Alabama Forestry Planning Committee. This magazine is also an educational tool. Recognition occurs through the TREASURE Forest Award.

The TREASURE Forest Program has been a tremendous success. In fact, it has been so successful that it was used as the pattern for the National Forest Stewardship Program passed by the U.S. Congress in 1990.



What Is the TREASURE Forest Award?

The TREASURE Forest Award is earned by private landowners who display their commitment to the TREASURE Forest ethic through the physical management that takes place on their land. The award includes a numbered and signed certificate, a TREASURE Forest sign to display on the property, and a TREASURE Forest cap. When the award is given, the land is called a Certified TREASURE Forest and the landowner is called a TREASURE Forest landowner.

TREASURE Forest and TREASURE Forest landowner are earned titles that represent good stewardship of the land, protection and/or enhancement of the multiple values of the forest, and providing benefits to both present and future generations. Since the inception of the TREASURE Forest Program, over 1,400 TREASURE Forests have been certified, collectively totaling more than 1.7 million acres of Alabama forestland.

Minimum Standards and Basic Guidelines

Minimum standards and basic guide-

lines are designed to help landowners, natural resource managers, and others involved in promoting the TREASURE Forest Program. They are the basis upon which the TREASURE Forest Award is earned and will be useful in two specific ways:

1) To identify the types of management practices that can be conducted, based on chosen objectives, to earn the TREASURE Forest Award.

2) To identify when management practices, based on chosen objectives, have been conducted by landowners in both quantity and quality that are deserving of the TREASURE Forest Award.

To use the criteria, a primary and at least one secondary management objective must be identified. Based on the identified objectives, appropriate minimum standards and basic guidelines can be determined. Though a landowner may do much more than the criteria listed, certification for the TREASURE Forest Award will be determined based on the appropriate minimum standards. In addition to the necessary accomplishments by objective, the non-objective accomplish-

ments must be met regardless of the primary and secondary objectives.

Non-Objective Accomplishments

1. Timber protected from fire, insects, and disease.
2. Damaged timber salvaged unless it interferes with primary or secondary objective.
3. Definitive plans to regenerate all forestland before final harvest, unless land use will change.
4. Management for primary and secondary objective performed in a manner least damaging to other resources.
5. Water quality protected and erosion minimized by following Best Management Practices.
6. Unique plant communities, critical wildlife habitat, and endangered species habitat are protected.
7. Management for primary and secondary objectives done in the most aesthetically pleasing manner.

TIMBER PRODUCTION As Primary Objective:

- Active protection of stands from

Continued on page 24

- fire, insects, and disease by:
- Reducing fire hazard.
- Timely salvage of damaged timber.
- Managing stands to reduce insect/disease hazard.
- Planned regeneration occurring soon after final harvest.
- Harvesting timber before biological maturity.
- Thinning stands as needed to maintain vigor
- Size and shape of harvest areas compatible with other objectives.
- Tree species favored and managed that are best adapted to specific sites.
- Non-merchantable trees controlled as compatible with other objectives.
- Stands managed toward achieving full stocking.

As Secondary Objective:

- Salvage of damaged timber unless it interferes with primary objective.
- Timely regeneration occurring after final harvest.
- Stands thinned as needed to maintain vigor.
- Trees may reach biological maturity but must be harvested before decline becomes evident.
- Tree species favored and managed that are best adapted to specific sites, unless it conflicts with another objective.
- Non-merchantable trees managed, unless it conflicts with other objectives.
- Adequate stocking maintained as compatible with other objectives and past history.
- Size and shape of harvest areas compatible with other objectives.

WILDLIFE

As Primary Objective:

- Feature species identified and wildlife management plan followed.
- Enough suitable habitat deliberately created, maintained, and/or improved to support healthy populations of desired species.
- Wildlife populations kept from becoming so dense that they are damaging their own habitat, or the habitats of other species.

- Other resources managed so as to enhance the habitat of featured wildlife species.

As Secondary Objective:

- Desired species identified and wildlife management plan followed.
- Some habitat created, maintained, and retained for desired species consistent with primary objective.
- Wildlife populations kept from becoming so dense that they are damaging their own habitat or the habitat of other species.
- Other resources managed in ways that supply some habitat needs of desired wildlife species, considering the property as a whole.

RECREATION

As Primary Objective:

- Recreational use specified and management plan followed.
- Recreational opportunities such as picnic areas, campsites, walking trails, boat docks, etc. must be actively maintained, retained, and created.
- Litter controlled.
- Actual recreational usage of the property.
- Environmental impact of recreational activities minimized.
- Area with hunting as recreational use must show evidence of developed hunting opportunities beyond wildlife management such as hunting blinds, camping areas, etc.

As Secondary Objective:

- Recreational use specified and management plan followed.
- Recreational opportunities maintained, retained, and created as compatible with primary objective.
- Litter controlled.
- Environmental impact of recreational activities minimized.
- Areas with hunting as recreational use must show evidence of developed hunting opportunities beyond wildlife management.

AESTHETICS

As Primary Objective:

- Significant accomplishment toward maintaining or enhancing aesthetics must be shown such as:
- Retaining trees with good fall colors.
 - Planting or maintaining flowering

trees, shrubs and wildflowers.

- Identifying and maintaining scenic overlooks, unique geological features, and waterfalls.
- Improving access to scenic areas.

As Secondary Objective:

- Some accomplishments toward maintaining or enhancing aesthetics must be shown.

ENVIRONMENTAL EDUCATION

As Primary Objective:

Significant accomplishments toward:

- Sponsoring or organizing environmental education programs.
- Developing environmental education areas such as demonstration plots, nature trails, outdoor classrooms, etc.
- Featuring plant/animal species and communities and/or multiple-use management practices for educational purposes.

Examples of Environmental Education include the following:

- Soil and water protection education/demonstration.
- Plant and/or animal species identification.
- Endangered species identification and management.
- Landowner field day.
- Demonstration forest.
- Ecology workshop.

As Secondary Objective:

Some accomplishments must be shown toward:

- Sponsoring or organizing environmental education programs.
- Developing environmental education areas such as demonstration plots, nature trails, outdoor classrooms, etc.
- Featuring plant/animal species and communities and/or multiple use management practices for educational purposes.

Where Should You Begin?

If TREASURE Forest interests you or you know of someone who may be deserving of the TREASURE Forest Award, contact your local office of the Alabama Forestry Commission or other member agency or group of the Alabama Forestry Planning Committee. These agencies and groups are listed on page 3 of this magazine and are ready to assist you with the management of your lands. ♣

Escambia Experimental Forest

A Living Laboratory for Long Term Longleaf Pine Research

By CHARLES K. MCMAHON

Project Leader, USDA-Forest Service
Southern Research Station, Silviculture Research Project, Auburn University

EXPERIMENTAL FORESTS have been used for many years by research organizations as “living laboratories” where long-term research studies can be conducted. For forestry and related natural resources research, “long term” can often mean decades of continuous study before meaningful results can be obtained. The Escambia Experimental Forest was established on April 1, 1947, when the T.R. Miller Mill Company of Brewton, Alabama, provided land at no cost to the USDA-Forest Service through a 99-year lease. This 3,000-acre forest, located seven miles south of Brewton in south-

west Alabama, was selected as typical of a second-growth longleaf pine forest that, at the time, covered about 6.2 million acres in south Alabama and northwest Florida.

The forest is managed on site by a forest superintendent employed by the USDA-Forest Service. Research direction and administration of the forest is provided by the USDA-Forest Service, Southern Research Station, Silviculture Research Project, which is located on the campus of Auburn University.

History

In 1874, a sawmill was built on the

Conecuh River, not far from the mouth of Lindsey Creek. This creek and some of its tributaries on the Experimental Forest were ditched for water logging to supply this mill. A dam for a storage pond can still be seen. Some “sinkers” (heavy logs that sank to the bottom of the waterway or pond) have been recovered from creeks on the forests. Railroads were built into the forest at the turn of the century, and nearly all the remaining merchantable timber was cut. Some residual stems, too small to cut, were later turpintined.

About 80 percent of the forest is in the upland longleaf pine type and the



Bill Boyer, USDA Forest Service emeritus scientist, at entrance sign of Escambia Experimental Forest.



Tom Croker, Jr. addresses advisory committee meeting on the Escambia Experimental Forest in 1957 (Bill Boyer fifth from right taking notes).

remainder in slash-hardwood bottoms. Site quality for longleaf is extremely varied, but averages about 70 feet at 50 years. When the Experimental Forest was established, the pine stands in the 4-inch and larger DBH class averaged 73 trees, 32 square feet of basal area and a volume of 690 cubic feet per acre. Average age of the second-growth longleaf pine then was 35 years and is now 88 years. Since management began, about 1,200 acres have been naturally regenerated to longleaf pine, and now contain stands ranging in age from 3 years (1996 seed crop) to 52 years (1947 seed crop).

Research on the Escambia was initially aimed at solving the principal management problems associated with longleaf pine including natural regeneration, management alternatives, growth and yield, rotation lengths, thinning regimes, forest grazing, and economic costs and returns. Today the Escambia Experimental Forest constitutes a unique example of longleaf pine ecosystems in all stages of develop-

ment. The combinations of stand ages, sites, and conditions found here exist nowhere else. Approximately 20 percent of the remaining longleaf stands in the south are within 75 miles of the forest.

The 50th anniversary of the Experimental Forest was celebrated in July 1997 at a time of rising concern about the continuing regionwide decline of longleaf pine ecosystems. Less than 3 million acres remain of the estimated 92 million acres dominated by this species in pre-settlement times. The rich cultural tradition and ecological values associated with the longleaf ecosystem, coupled with the species' adaptability to a wide range of management objectives, make



Bill Boyer is still "preaching longleaf" after more than 40 years of research on the Escambia Experimental Forest.



A new generation learning about longleaf pine regeneration and management on an Experimental Forest tour in 1997.

longleaf pine a suitable choice for many private landowners in the South, especially when utilizing low-cost natural regeneration strategies and relatively long rotations.

Among those celebrating the 50th anniversary were Tom C. Croker, Jr., who helped set up the forest in 1947 and provided leadership until his retirement in 1974, and Dr. William D. (Bill) Boyer, who has worked for over 40 years on the forest and continues to provide research and management guidance to the USDA-Forest Service as a retired emeritus scientist.

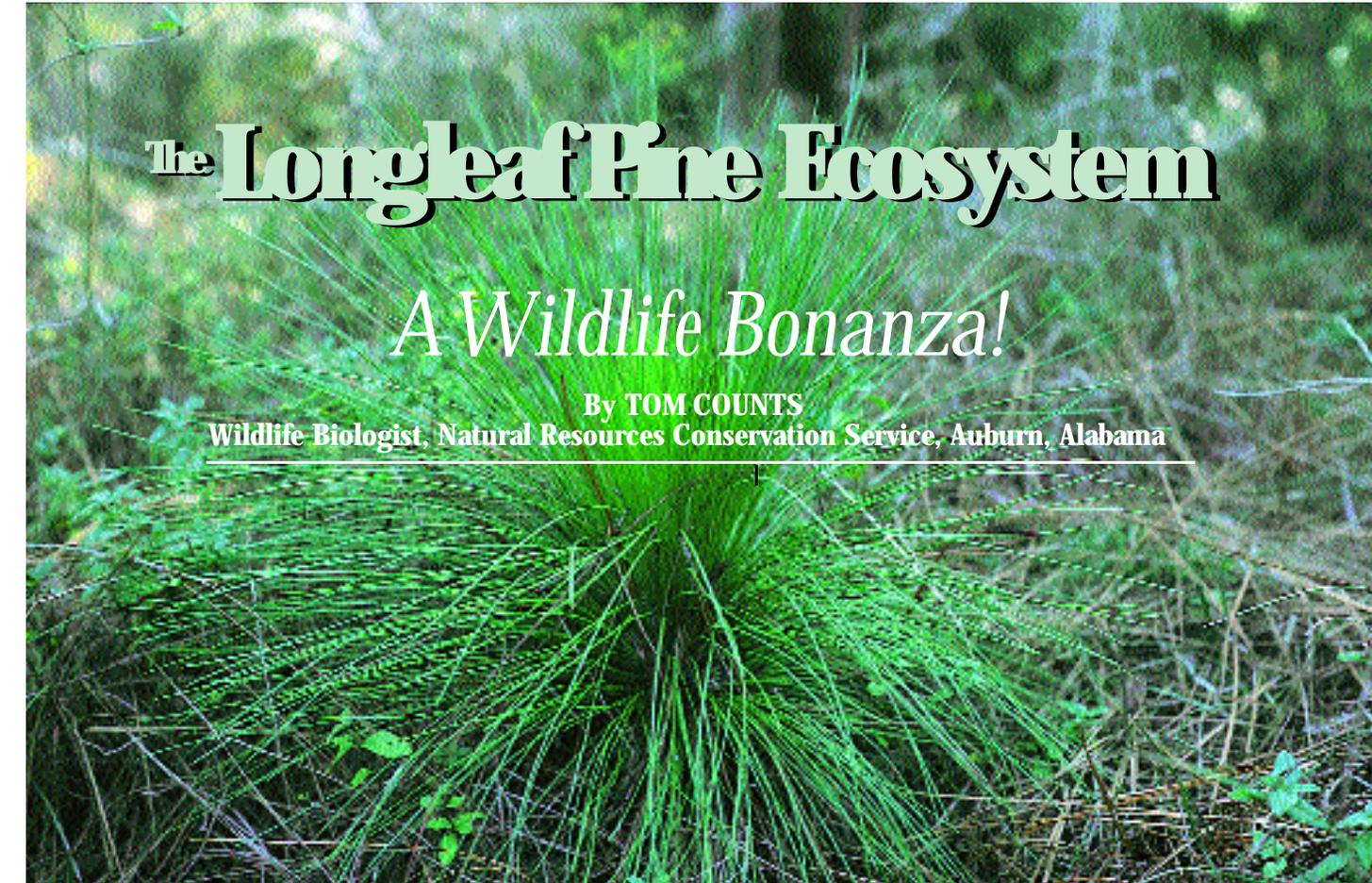
Research on the Forest

The forest supports many continuing long-term research studies and management demonstrations. Research has involved all aspects of longleaf pine natural regeneration, including development of the shelterwood system for this species. Some examples of other long-term studies and demonstrations include:

1. Stand management and management alternatives including even-aged, two-aged, and all-aged management methods.
2. Growth and yield of even-aged natural stands in relation to age, site quality, and stand density. A regional longleaf growth study was initiated on the Escambia in 1964 and later spread to other locations in Alabama, Mississippi, Florida, Georgia, and North Carolina. Nearly half of the 305 plots in this study are located on the Escambia.
3. Fire ecology, including long-term effects of season and frequency of prescribed fire (or fire exclusion) on growth of dominant pine overstory, as well as effects on composition and structure of the hardwood midstory and both woody and herbaceous vegetation on the forest floor.
4. Farm Forty Demonstration—forty acres of understocked second-growth longleaf pine forest were set aside in 1947 for a demonstration of small wood-

lot management. The initial goal was to product high quality poles and logs on a 60-year rotation. The rotation has since been extended to 80 years. Over half (22 acres) of the “forty” has been harvested and naturally regenerated to longleaf pine and now supports stands ranging in size from grass-stage seedlings to small sawlogs.

To date, work on the Escambia has provided information for over 160 publications and dozens of workshops. Uncounted other reports have utilized data from the Escambia. The long-term silvicultural and fire ecology study sites provide “living laboratories” available to other researchers at universities and research foundations working to unravel some of the many fascinating mysteries lurking within what was once one of the most extensive forest ecosystems in North America. Long-term research, often difficult to retain, is once again proving to be both an ecologically and financially sound investment. 🏠



The Longleaf Pine Ecosystem

A Wildlife Bonanza!

By TOM COUNTS

Wildlife Biologist, Natural Resources Conservation Service, Auburn, Alabama

A WELL-MANAGED stand of longleaf pine is like a piece of natural history that should be passed to future generations.

Longleaf pine, properly managed with prescribed fire and thinning, can be the best habitat available to many wildlife species. It is not just another pine tree, it is a wildlife bonanza!

The acreage of longleaf has been on the decline for over 100 years. In fact, it is estimated that only five percent of the original longleaf forest acreage remains. Several organizations such as the Longleaf Alliance, which is a partnership of universities, private interests, and government agencies, have been established with the commitment to restore the longleaf ecosystem. This effort was boosted by the Secretary of Agriculture with the designation of parts of nine Southeastern states as a Longleaf Pine National Conservation Priority Area for the Conservation Reserve Program (CRP).

This designation provided private landowners with incentives to enroll eligible lands into CRP, which will be

established to longleaf and managed for associated wildlife. This has accomplished a significant turnaround in the decline over its historical range.

Approximately 32,000 acres of longleaf restoration were approved in the initial CRP sign-up period in Alabama.

Longleaf pine is a critical part of the ecosystem that can yield the wildlife benefits that nature intended. Planting rates of between 300 and 500 trees per acre will ensure that the canopy remains open to prevent early canopy closure.

The use of controlled fire is an essential tool to maintain natural plant and animal communities within the longleaf pine ecosystem.

Prescribed Fire

It has long been recognized that naturally occurring fires have been a factor in the forests of the South for thousands of years. The longleaf pine, and many of the species of wildlife that are commonly associated with it, not only survive in the presence of fire but actually thrive with it. Forest landowner Daniel Powell of

Washington County summed it up very well when he said, "If you do not burn a longleaf stand, you simply will not have longleaf."

From the grass stage throughout its life, the longleaf pine is adapted for fire. Although a wildfire in the right conditions can be devastating to a stand, a combination of the open growth habit of the longleaf pine, coupled with the frequent use of prescribed fire, can help develop excellent wildlife habitat.

The fire stimulates the production of many native grasses, legumes, vines, and shrubs, and releases important nutrients such as nitrogen into the soil. In some

If you do not burn a longleaf stand, you simply will not have longleaf."

—Daniel Powell,
Washington County landowner

cases, using selective herbicides improves the variety of plant species available for wildlife.

Since the longleaf is tolerant of fire throughout the early stages of growth, the benefits of prescribed burning are immediately available. Loblolly pine is not as fire tolerant and stands are generally burned a little later in age than longleaf stands.

The use of prescribed fire is much like using electricity. It is welcomed when properly used, or it can be dangerous when proper controls are not in place. Anyone who uses prescribed fire should be trained and experienced. Programs are available to teach the basics of prescribed burning. Trained and experienced consultants are also available to conduct prescribed burns. A burning permit from the Alabama Forestry Commission is required.

Eastern Wild Turkey

The eastern wild turkey rapidly declined with the clearing of forestland. Today, populations of wild turkey can be found using habitats in most areas of the state. Turkey prefer an open forest habitat, intermixed with grassy openings. The use of pre-

scribed fire is recommended as soon as tree height in young stands allows for safe burning. These areas provide food sources such as seeds and insects, tall grasses and forbs for nesting, and openings for brood habitat. For good wild turkey management, prescribe burn at least one-third of the stand annually and provide openings on 10 to 50 percent of the area being managed. Openings of 5 to 20 acres are preferred.



White-tailed Deer

Although there is no shortage of deer habitat, it is an established fact that deer prefer the browse in areas that have been burned.



Fire increases the yield and quality of forbs, legumes, and other browse species. For proper habitat enhancement, prescribe burn at least 20 percent of the stand annually, in conjunction with planting well-distributed annual food plots of at least 1 to 5 acres.

Red-cockaded Woodpecker

The red-cockaded woodpecker was



Red-cockaded woodpeckers nest in cavities of pines that are at least 60 years old.

once common throughout the South. These birds make nesting cavities in pines that are typically 60 years or more in age. While it is quite a stretch of the imagination to consider a newly planted longleaf pine seedling as habitat for this bird, the longleaf is capable of living and growing long enough to qualify. Red-cockaded woodpeckers prefer habitats where hardwoods are controlled with labeled herbicides and prescribed fire and stocking of stands is maintained at 50 to 80 square feet of basal area. A 100-year rotation is the minimum recommended for the red-cockaded woodpecker.

Bobwhite Quail

The longleaf pine provides excellent habitat for bobwhite quail. The



use of planting rates of 300 to 500 per acre increases the time for canopy closure. Allowing light to reach the floor increases the development of understory plants that are beneficial to bobwhite quail. This new growth attracts insects on which the chicks are dependent. Annual use of prescribed fire on 33 to 50 percent of a tract is recommended.

Additional management practices are light winter disking and planting small food plots. Retain areas with blackberry thickets, wild plum, and similar cover.

Gopher Tortoise

The gopher tortoise lives in the deep sandy soils of the southeast including south Alabama. Most burrow locations are in longleaf



pine associated habitats and newly planted pine stands that are sufficiently open for the establishment of low growing herbaceous vegetation. They feed on legumes, fruits, and forbs found in open canopy areas. These plants are stimulated by prescribed fire. Areas of closed canopy do not provide this type of habitat. 🐢

Environmentally Safe Deer Waste Disposal

By **JOAN LOVE SMITH**

Public Affairs Specialist, USDA-Natural Resources, Conservation Service, Auburn, Alabama

ACCORDING to officials at the Alabama Department of Conservation and Natural Resources' Game and Fish Division (GFD), Alabama hunters harvest more than 400,000 deer every year. They are enthusiastic about their sport and often share their love of hunting with their children and grandchildren. Most hunters are conscientious about proper field dressing and disposal of deer wastes. But some clubs and landowners may dispose of the remains in inappropriate locations such as by the roadside, in an old well, or in a ditch or stream. One group disposed of them in a wetland behind the clubhouse. Improper disposal can pollute the water and cause serious health problems. Now there is a very simple, low cost, environmentally sound solution to this problem—composting! For a minimal cost, a hunting club can build a composter to accommodate waste from about 40 deer per year. It requires very little work, is environmentally sound, has no odor, and, significantly, the composted material can be used as fertilizer on next season's wildlife openings or home gardens. The process is simple.

1. Build foundation — an 8' x 10' concrete or firmly packed gravel pad.
2. Construct a 5' high x 8' deep x 10' wide cell on the foundation. Partition to allow one half to be used for the actual composting, the other for storage of sawdust.
3. Construct a roof over the composting bin.
4. Place a 4-to-6 inch layer of sawdust or hay on the half of the pad to be used for composting.
5. Place deer entrails on the sawdust.
6. Add a quart of ammonium nitrate.

7. Add 4 to 6 inches of sawdust—enough to cover the entrails.
8. Water thoroughly. The sawdust should be damp, like a wet sponge.
9. Add water one or two times a week,

- keeping the sawdust damp (do not water enough to create runoff).
10. When additional deer waste is added, repeat the process.

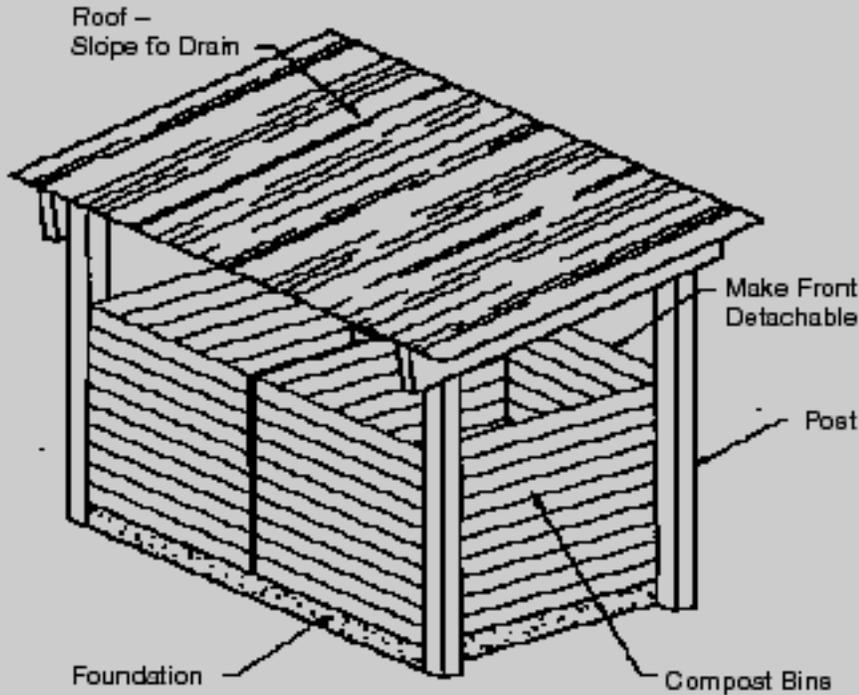
A conveniently located water source is



John Reid, Manager of Scotch Wildlife Management Area views demonstration composter for disposing of deer hide, skeleton, and entrails.

Deer Composter

Not to scale



a must. In six to eight months, the composted material is ready to spread. The composting process can be accelerated by using a two-stage composter that involves building two cells and moving the material periodically from one cell to the other.

Where did this deer composting idea come from? Recognizing the need for an environmentally friendly method to dispose of deer entrails, Norman Burton, Resource Conservation & Development Coordinator with the Ala-Tom RC&D Council, approached Scotch Wildlife Management Area manager John Reid and Supervising Wildlife Biologist Gene Widder about building a demonstration deer composter at the area. The United States Department of Agriculture's Natural Resources Conservation Service (NRCS) designed the composter, the Game and Fish Division installed and manages the demonstration project, and funding was provided through the Ala-Tom RC&D Council headquartered in Grove Hill, Alabama. According to Burton, funding for this project was

made possible by a state appropriation to RC&D Councils through the Alabama Legislature. Senator Pat Lindsey and Representative Thomas Jackson helped secure this appropriation.

During the summer of 1998, the demonstration model, which can accommodate 150 deer per season, was con-

structed at the Scotch Wildlife Management Area for less than \$2,000. This prototype was built according to NRCS design specifications based on agricultural operations for poultry and hogs. The average hunting club could use a composter about one-third the size of the demonstration model that could be constructed by club members from locally secured materials at a significantly lower cost.

How have the deer hunters responded to composters? According to Reid, "They are a little curious, but once they go down and have a look at it, they think it is a good idea." When asked about negative aspects of composting, Reid responded, "I don't know of any problems. As long as you cover the deer immediately after placing it in the composter, you won't have any odor problems."

Concerning problems, Burton added, "You, of course, have to spend the money to purchase the materials, you have to expend a little labor to construct the composter, and you have to make a conscious effort to check on it about every two weeks and add water as needed throughout the year. That is going to take some time. But some innovative clubs might be able to come up with some method to water it automatically."

Hunting clubs or individuals interested in more information about deer composters designed for their particular situation can contact their local USDA-Natural Resources Conservation Service office. ☎

Is your Mailing Label Correct?

Are you receiving *Alabama's TREASURED Forests* at the correct address? If not, please complete this form and return to:
Alabama's TREASURED Forests Magazine, P.O. Box 302550, Montgomery, AL 36130-2550

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.
E-mail changes of address to: tfmag@forestry.state.al.us

Ten Commandments for Seedling Survival

With dry conditions over most of the Southeast hampering reforestation activities, a plant pathologist at Auburn University has provided tree farmers with “Ten Commandments” of do’s and don’ts to help improve seedling survival. Dr. William Carey, a faculty member at Auburn’s School of Forestry, says handling seedlings with tender loving care from the time they leave the nursery until planted in the field is an essential ingredient for tree survival and promoting growth.

The extended drought that has gripped much of the Southeast for two years running makes special attention to seedling care from nursery to planting crucially important in the 1999-2000 planting season. Here is a list of “Ten Commandments for Seedling Survival.”

- 1. Do not allow seedlings to dry out.** Ample moisture is the key factor in seedling survival; seedlings must never be allowed to dry out from the nursery to planting to established stand in the field—“if they dry, they die.”
- 2. Transport seedlings carefully.** Rough handling can damage root systems and predispose seedlings to stress.
- 3. Avoid temperature extremes.** Fluctuations in temperature, especially excessive heat, during storage and transport can result in seedling trauma during outplanting.
- 4. Plant promptly.** Once seedlings are lifted, minimize storage time, especially early in the season, and avoid extended transport time.
- 5. Do not trim or prune seedling roots.** Seedlings need every single tiny root to absorb moisture and nutrients from the ground, so the more root surface the better the growth.
- 6. Do not wash or shake gel from seedling roots.** Gel applied to roots at the nursery prevents drying out during transport, decreases planting shock, and improves acclimation to planting site.
- 7. Plant bareroot seedlings after October, preferably after Dec. 15, and before April.** Cooler temperatures are more conducive to seedling survival and healthy growth.
- 8. Plant seedlings deeply.** Greater exposure to the soil and its water content—even one-half inch of added depth of planting—significantly improves survival rates.
- 9. Use mechanical planting, if possible.** Although slightly more expensive, planting mechanically yields better results and is an investment that pays off.
- 10. Do not attempt to plant seedlings that have frozen in the pack.** Freezing irreversibly damages the root system, leading to seedling death.

Source: International Forest Company, Odenville, Alabama.

Visit the Alabama Forestry Commission Web Page:

www.forestry.state.al.us



Alabama's TREASURED Forests
513 Madison Avenue
P.O. Box 302550
Montgomery, Alabama 36130-2550

CHANGE SERVICE REQUESTED

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