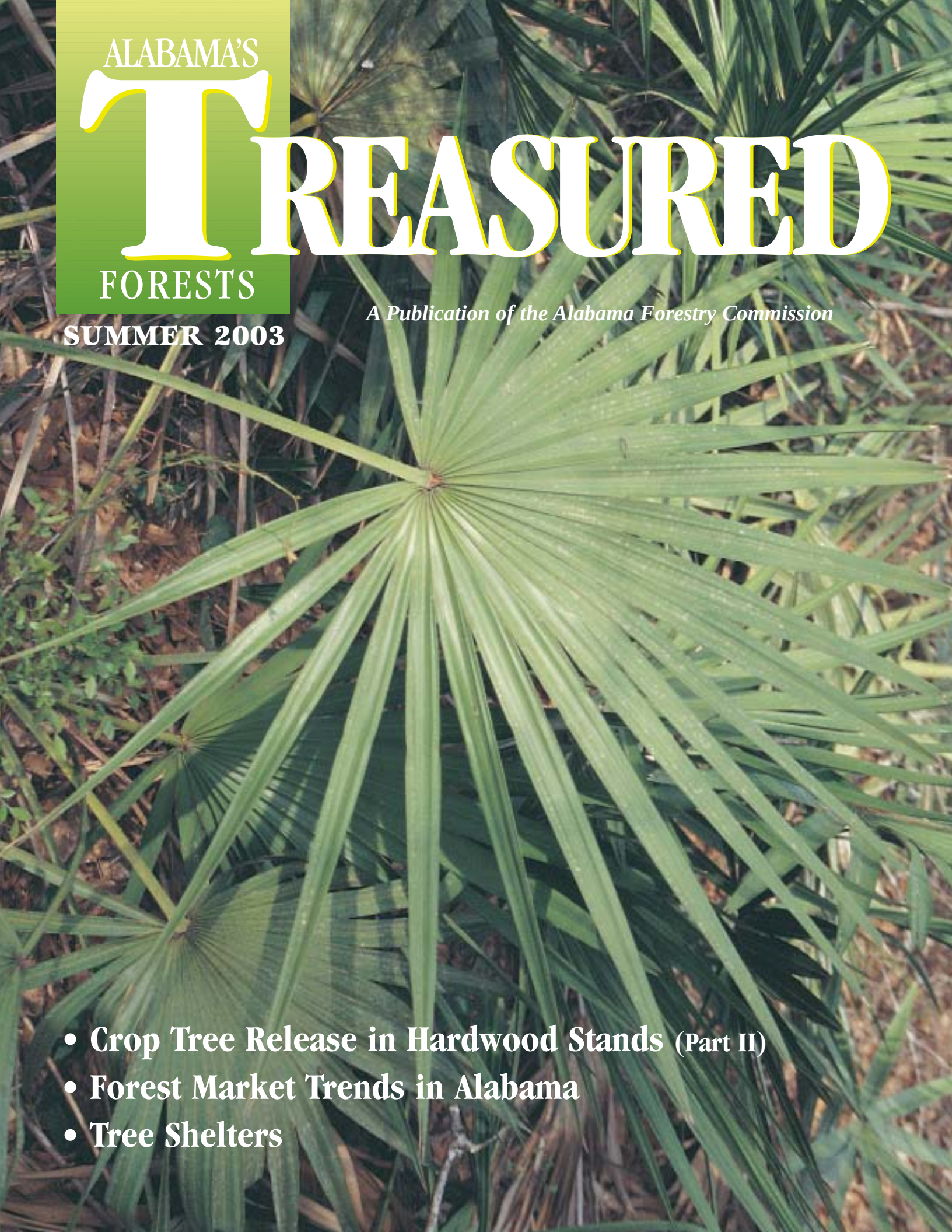


ALABAMA'S TREASURED FORESTS

A Publication of the Alabama Forestry Commission

SUMMER 2003

- **Crop Tree Release in Hardwood Stands (Part II)**
- **Forest Market Trends in Alabama**
- **Tree Shelters**

A Message from . . .

Bob Riley
Governor, State of Alabama

Thousands of Alabamians and out-of-state visitors will be taking advantage of our state's natural resource recreational opportunities this summer. Few states have as much or as diverse natural resource offerings as Alabama.

We have approximately 23 million acres of forestland in our state growing over 16 billion trees. Our forest base is the size of Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, and Rhode Island combined. We have over 47,000 linear miles of perennial streams and rivers in our state, ranking seventh in the nation. One-twelfth of all ocean-flowing water in the United States travels through Alabama.

These healthy, abundant forests and pristine streams and rivers create a wealth of biodiversity. Alabama ranks fourth in the nation in total number of species of plants and animals, even though we rank only 29th in size. In total number of plant and animal species per acre, we are second only to Florida. Alabama is home to 1.4 million of our nation's white-tailed deer and 350,000 of its four million wild turkeys.

One of the reasons Alabama has an abundance of forest-related resources is because of the land management work being done by the Alabama Forestry Commission and private non-industrial landowners. In Alabama, 95 percent of our forests are privately owned. This represents 440,000 timber ownerships with 50 percent of all forest owners owning less than 500 acres of land. Combined, these same lands make up the second largest commercial forest in the nation, second only to Georgia. They also support Alabama's number one manufacturing industry, the forest products industry.

Because of our forests' importance to our economy, the care of them is vital. Through multiple-use forest management programs like the Alabama Forestry Commission's TREASURE Forest program (acronym for Timber, Recreation, Environment, and Aesthetics for a Sustained Usable REsource), we can help ensure that our state's forests and natural resources will not only meet the needs of our citizens today, but will be there for the citizens of tomorrow.

Timothy C. Boyce
State Forester

At the annual Southern Group of State Foresters meeting held recently in Little Rock, Arkansas, urbanization (or Wildland Urban Interface) was one of the major topics. Cities are rapidly encroaching on what was once rural farm and timberland, bringing with it many problems for the forestry and fire communities.

According to the results of the Southern Forest Resource Assessment released last year, urbanization accounted for 68 percent of the forestland clearing in the state. With populations rising as well as cities and towns expanding their boundaries, the forest community is already seeing and will continue to see changes in the areas of fire protection and forest management.

One of the greatest changes has been in the area of fire suppression. Years ago rangers with the Alabama Forestry Commission responded to wildfires and put them out by plowing a fire line around them. Now in many urban areas, rangers protect homes, businesses, and other structures from destructive flames by utilizing the same practice.

Another area affected by urban sprawl is forest management. Already one of the easiest and cheapest tools of forest management, prescribed burning, is being lost to land managers and landowners in some urban areas. In most places near large cities a prescribed burn will not pass the smoke screen test. Other more expensive methods of herbaceous weed control and site preparation must be used. In addition, public opinion of other silvicultural practices and harvesting methods must be addressed by land managers.

Forested land around large urban areas is very important. It filters drinking water and storm runoff water, provides buffers from visual and noise distractions, and helps cool the temperatures in hot summer months. Because of these benefits, it is important that land managers continue to be able to practice forestry in urban areas.

With the continuing urban dynamics, it will be important that people in the forest industry and fire services sit at the table with policy and decision makers in these urban areas. If our interests and concerns are to be heard today and in the future, we must become a part of the process by which decisions are made.

ALABAMA'S TREASURED FORESTS

Vol. XXII, No. 3 Summer 2003

CONTENTS

DEPARTMENTS

COVER: Saw Palmetto is a common shrub found in the forests of southern Alabama. (Story on page 32.) *Photo by Madeline Hildreth*

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. Web site: www.forestry.state.al.us

FIRE-BREAK FARM

By ***Tilda Mims***
Information Specialist, Alabama Forestry Commission

Brown Creek is a tributary of the noted Cahaba River just to the north, and it enters and exits the Morrises' pond.

George and Sandi Morris work together as equal partners in their marriage, their church, and their forest stewardship. Since 1990, they have worked side by side on Fire-Break Farm in Bibb County, doing hard and dirty work that more than earns the term "sweat equity." Sandi loves the farm as much as George and they are proud of doing all the work on the farm themselves.

They worked the land for several years as caretakers for absentee landowners. The owners did not want trees removed, so the Morrises were very limited in what they could do to enhance its productivity. In 1990, the owners decided to sell, but wanted the property to remain with people who would love it and care for it . . . they chose George and Sandi Morris.

The couple knew they were blessed with an opportunity as well as a significant challenge. The tract had been high-graded more than 50 years earlier and not actively managed since. The absence of thinning, harvesting, or burning made risk of wildfire substantial and access to the farm limited. Large quantities of loblolly pine were stunted due to overstocking and the whitetail deer population was very small.

The Morrises realized the untapped potential of the land and were eager to get to work. They asked consultant forester Terry Jacobs of Tuscaloosa to prepare a Stewardship Plan for the property in 1992, and Fire-Break was certified as a TREASURE Forest that same year.

In slightly more than ten years, they have proven not only good stewards of the land, but outstanding leaders and role models in multiple-use forest management as well. Their commitment


Photo by Tilda Mims

received statewide recognition in 2002 when they were awarded the Helene Mosley Memorial TREASURE Forest Award for Northwest Alabama.

Timber Management

Their stewardship plan called for immediate action to get pine stands in maximum production. After a select harvest cut left only vigorous sawtimber candidates growing, an intensive prescribed burning program was established that includes a burn every three to four years to reduce fuel and encourage healthy wildlife habitat.

Pine plantations are on a 35-40 year rotation until harvest. Regular thinnings are scheduled at 12-15 years and on an "as-needed" basis until final harvest. Insect-damaged trees are felled and disposed of promptly throughout the year.

Fire-Break Farm now boasts 157 forested acres with 52 acres of mature pines and 30 acres of pine plantation. An additional 75 acres of pine/hardwood mixed stands prevent erosion along drains and provide wildlife habitat. All trees are now flourishing under careful management and excellent site selection.

Wildlife Habitat Enhancement

The Morrises take every opportunity to protect and promote wildlife habitat. In fact, it is not entirely accurate to say that wildlife is their *secondary* objective because they feel so strongly about the protection and development of wildlife habitat.

Wildlife enhancement began by clearcutting two small upland hardwood areas and planting them back to loblolly pine. This created some much needed foraging and bedding areas for deer. More than 1,000 autumn olive, 3,000 sawtooth oak, and 75 fruit trees were planted as permanent food plots. Loblolly pine and lespedeza were planted around open fields to enhance edge

(Continued on page 6)


Photo by Tilda Mims

This young rabbit (right) and deer (below right) are just two of many animals making their homes at Fire-Break Farm. (Bottom left) Showy wildflowers are a special treat along the banks of the lake.


Photo by Tilda Mims


Photo courtesy of the Morrises


Photo by Tilda Mims

More than eight miles of permanent fire lanes and interior roads are maintained on Fire-Break Farm.

effect. Pines around fields are on a pruning program to increase clear wood and control unwanted vegetation.

Seven food plots totaling eight acres target specific seasonal needs of wildlife. Winter foods include Ladino and crimson clovers as well as wheat. An additional eight acres are planted each year in grain sorghum, corn, peas, and sunflowers. Ten acres of pasture is mowed to maintain open areas. Windrows have been retained for habitat enhancement.

More than eight miles of permanent fire lanes and interior roads are maintained with water bars and turnouts to prevent erosion and serve as linear wildlife openings for deer and ground-nesting birds.

The Morrises established 40-50 bluebird boxes that annually house at least 30 nesting pairs plus a variety of flying and gray squirrels. Numerous bird feeders, hummingbird feeders, and duck boxes are scattered about the farm. Six battery-powered supplemental feeders maintain both game and non-game species.

Recreation

Sandi and George both love hunting and regularly invite family and friends to join them. They have 22 tree stands and seven shooting houses. Two shooting houses accommodate both an adult and a child for supervised hunting. They are currently working on fencing the property to limit access.

Another major project the Morrises undertook was rebuilding a small farm pond into a four-acre pond stocked with bass, bream, sunfish, red-eared sunperch, and grass carp. Brown Creek is a tributary of the Cahaba River just to their north, and it enters and exits the pond.

In 2002, they built a one and one-half story 24' x 24' rustic cabin overlooking the pond. They used building materials salvaged from an old homeplace on the property which was built from timber grown on the farm. It has an outhouse and a pump for water at the kitchen sink. They plan to use it to give children and school groups a taste of rustic life.

Fire-Break

George and Sandi moved from Tuscaloosa to the farm outside Centreville more than six years ago. The name "Fire-Break Farm" has a literal meaning for this family. George has worked for the Tuscaloosa Fire Department since 1978, and working on the farm is a "break" from his firefighting job. Sandi owned a successful Tuscaloosa business for many years and finds that Fire-Break gives her the respite she needs as well.

They enjoy sharing their farm with others, also giving them a little "break." They welcome 4-H Forestry Judging Competitions and FFA Forestry and Land Judging Competitions each year, and routinely host church events and local landowner tours.

Their greatest joy, however, comes from inviting children who haven't experienced a day on a farm. They sponsor annual Youth Hunt Weekends, school field trips, and special tours for underprivileged children who delight in the chance to fish, walk through the woods, and see wild animals. These youngsters also have the opportunity to see strong family values and the rewards of American work ethics in action at Fire-Break Farm.


Photo by Tilda Mims

Sandi and George Morris (left) have planted many flowering trees and shrubs to enhance their farm. They also built this rustic cabin overlooking the pond.


Photo by Tilda Mims


Photo courtesy of the Morrises

New TREASURE Forest Certifications

Congratulations to the 49 landowners who were awarded TREASURE Forest certification at the April 2003 meeting of the TREASURE Forest sub-committee. With these landowners, 14,715 acres were added to the TREASURE Forest program in Alabama. At this same meeting, 85 landowners received re-certification.

This brings Alabama to 1,878 certified TREASURE Forests with a total of 1,798,154 acres of forestland being managed under the guidelines of the TREASURE Forest program.

Landowner	Location of Property	Region
Tierre Agnew	Fayette	NW
Amason Farms Trust		
Robert Amason	Pickens	NW
Majorie Anderton	Lauderdale	NW
"Oak Ridge Hunting Lodge"		
Joe Andrews	Barbour	SE
"Banks' Lodge"		
W. Frank Banks	Walker	NW
"Natural Light Plantation"		
Tommy Bennett	Barbour	SE
"Triple B Farm"		
Bruce Bowden	Barbour, Dale	SE
Frank Bryan	Covington	SE
"Mozzele Doss Farm, Inc."		
Frank Bryan	Covington	SE
Joe Carter	Washington	SW
Kenneth Colburn	Bibb	NW
Danny and Cynthia Cooper	Sumter	SW
Donald Cowart	Russell	SE
Betty J. Craig	Butler	SE
Comer and Linda Daughtry	Houston	SE
Richard T. and Janice Dowdle	Pickens	NW
Bobby Downey	Jackson	NE
Barry and Laura Fields	Fayette	NW
Jon Fritts	Lauderdale	NW
Larry H. Gibson, Jr.	Sumter	SW
James Lloyd Golden	St.Clair	NE
Dr. Richard Gutherie	Bullock	SE
Ed and Ruth Holley	Barbour	SE
Walter S. Hulse, III	Coosa, Talladega	NE

Landowner	Location of Property	Region
Knox Gilmore Jennings	Montgomery	SE
Johnny Ladner	Clarke	SW
John and Jane Lee	Baldwin	SW
Dr. Mark McIlwain & Family	Colbert	NW
Russell and Tracie Newton	Chambers	NE
Joe and Juanita Owings	Bibb	NW
Kenneth Powell	Russell	SE
"Evans/Wise Treasure Forest"		
Eddie Raper	Marion	NW
Bruce F. Rogers	Bibb	NW
"S & S Farms"		
Tom Shirley & Tim Shirley	Houston	SE
Dr. Randy Smith	Jackson	NE
Ken Taylor	Baldwin	SW
Allen and Lisa Thompson	Limestone	NW
Henry Thompson	Autauga	SW
W. D. Clements Trust		
Irma Tuggle	Lee	SE
"Cardinal Creek Ranch"		
Randall Walker	Coosa	NE
Stuart Wells	Covington	SW
Jimmy Wendland	Autauga	SW
Alex Whatley	Lee	SE
J. N. Peters Trust		
Bob Wilkins	Dale	SE
Bobby and Becky Williams	Sumter	SW
Victoria C. Wiltsie	Wilcox	SW
James and Frances Woodham	Houston	SE
Jim and Joyce Woods	Chilton	SW
Dr. Bruce Wozow	Houston	SE

The tree marked with red paint is the crop tree; the author's hand rests on the tree to be girdled.

Crop Tree Release in Pre-Commercial Hardwood Stands

Part II of a Two-Part Article

By ***David Mercker***
Forestry, Wildlife, and Fisheries; University of Tennessee Agricultural Extension Service

After the best sites and trees are found and your equipment is ready, you can begin releasing crop trees from unwanted competition. You'll need to locate those crop trees with good future growth potential. Availability of sunlight is the leading limiting factor of tree growth. When crowns of adjacent trees touch each other, growth rates are reduced. Thus, by deadening unwanted trees whose crowns are touching the crown of your crop tree, more space is created for expansion.

Releasing Crop Trees

Condition your eye to locate trees needing release, not trees needing to be deadened. In other words, first find the crop tree, then ask, "Deadening which trees will improve my crop tree's growing condition?"

When selecting crop trees look for the following qualities:

- Healthy trees -- those with potential for further development

•Trees with good form -- relatively straight and with few forks

•Better-grade trees -- those with few knots

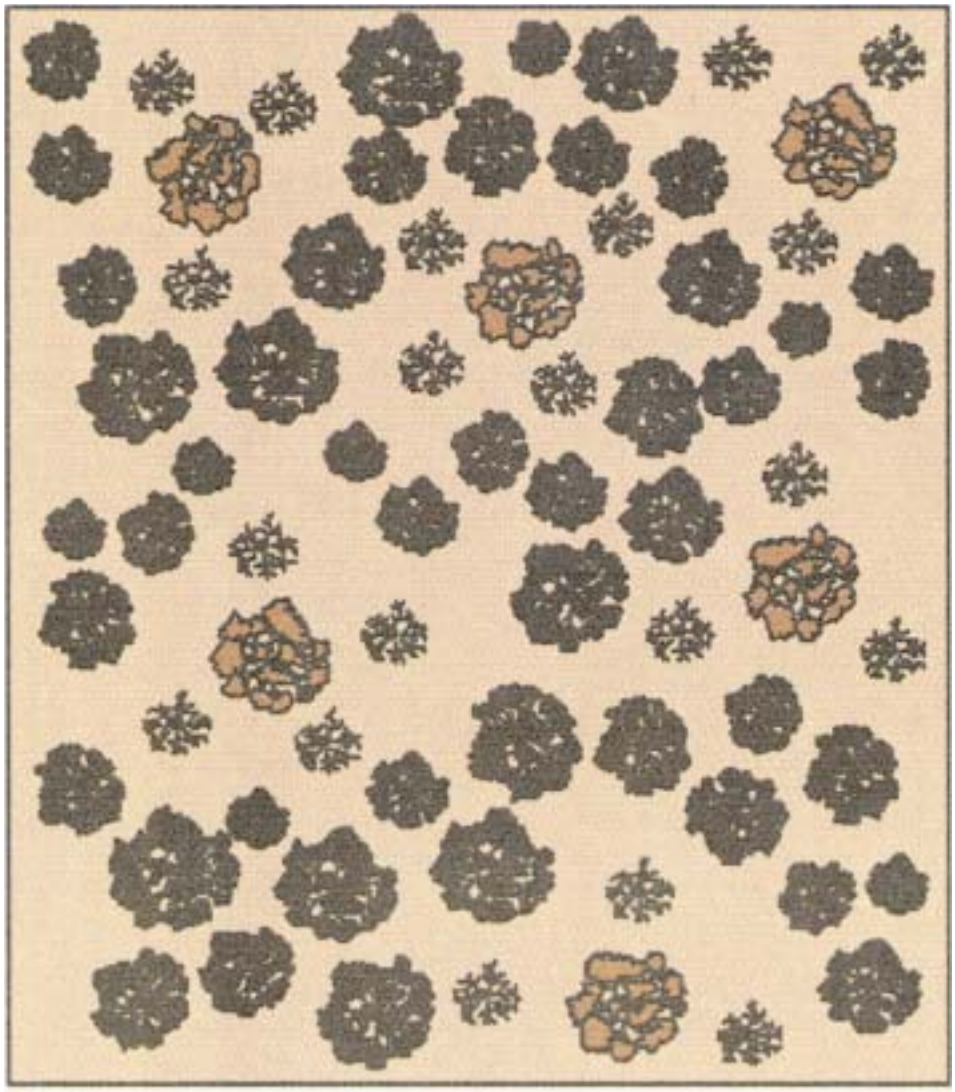
•Trees whose average age is between 15-30 years old -- stands that are too young won't have reached proper height, and older stands might not successfully respond to the release

•Trees in the upper levels of the forest canopy

The target is to release no more than 36 crop trees per acre. This equates to crop trees with an average spacing of 35 feet between each other. Spacing can be increased or decreased according to the stand conditions. For example, some 35-foot cells may not contain an acceptable crop tree, and that cell should be left. As a general guide, at least one-half of the 35-foot cells per acre should contain crop trees for the project to be justifiable.

Locate trees needing release, not trees needing to be deadened.

You should deaden all trees whose crowns touch the crown of the crop tree on three to four sides. Special note: deaden only those trees whose crowns are affecting your crop trees. Those in-between or below and not affecting the crop trees should remain. The leftover trees help to protect crop trees from wind damage and epicormic branching (unwanted branching on the lower bowl often caused by sudden increases in sunlight.)



 **Crop Tree**

 **Deadened Tree**

Simulated aerial view of released crop trees.

Procedure for Girdling Trees

Determine the trees to deaden. Using a chainsaw, turn the saw sideways and cut a complete girdle (ring) around the tree at a comfortable height (usually around three feet). Use proper safety procedures, as outlined in your saw safety manual. Then, cut another girdle at least six inches above or below the first one. Each girdle should be cut completely through the bark and into the live wood at least 3/4 inch. Make sure that each girdle meets at both ends so the vascular flow of water is completely severed.

Wildlife Benefits from CTR

Trees may take up to a year to die, but once dead, limbs fall off creating "snags." Standing dead trees provide food (decomposing insects), as well as sites for nesting, roosting, denning, and perching for many species of birds and mammals. Standing dead trees further benefit wildlife by allowing sunlight to reach the forest floor, increasing forage for deer and nesting cover for wild turkeys and many species of songbirds. Increased sunlight in the stand also allows the crowns of crop trees to expand, which increases mast production (e.g. acorns, beechnuts, and cherries), further benefiting wildlife.

Why Deaden Trees If They Could Be Sold?

Younger stands of pine trees are commonly thinned by logging, thereby generating an income rather than an expense. Why can't the same early thinning be applied to hardwoods as well? In some circumstances it can be feasible, particularly where markets allow and conscientious loggers are available; but in many cases, it's not feasible. Several characteristics unique to pine stands lend well to early thinning:

(Continued on page 10)

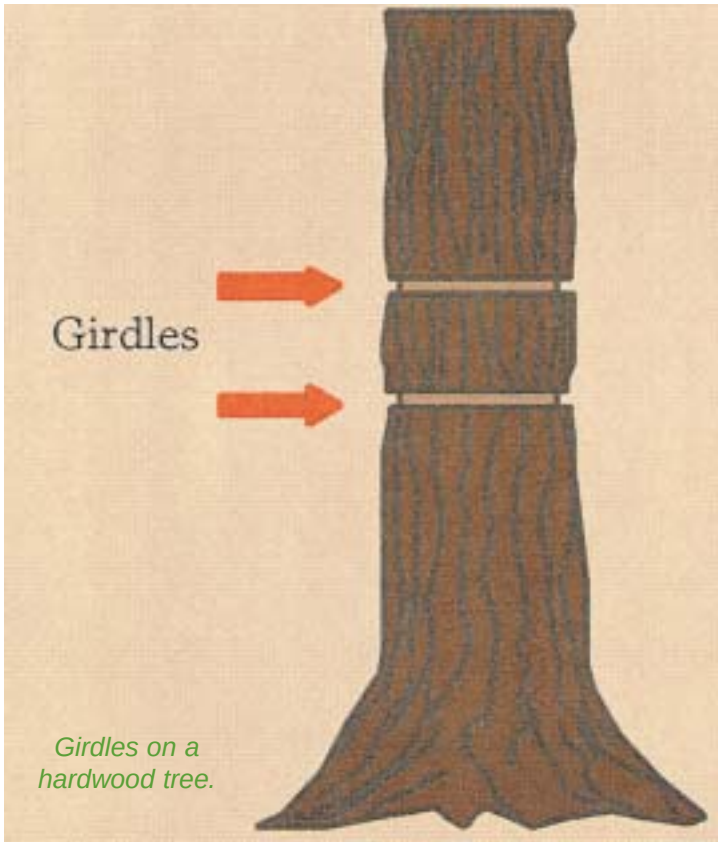
Crop Tree Release in Pre-Commercial Hardwood Stands

(Continued from page 9)

- In the South, the price for pine pulpwood is generally greater than for hardwood pulpwood. Normally, loggers are more willing to purchase small pine trees for profitability.

- Pine plantations are usually in straight rows and on level terrain. Logging equipment can maneuver through pine stands easily, which keeps the logging production rate high and profitable. Hardwood stands, normally having grown up naturally (not planted), are mixed species with variable spacing and are often found on steeper terrain, making logging slow, difficult, and expensive.

- Pine trees have flexible branches with conical-shaped crowns and can be felled and logged easily without causing excessive damage to residual trees. In contrast, logging younger hardwood stands often results in damage to the tops and bases of the very trees you are attempting to protect and release. For these reasons, manual CTR, rather than logging, should be considered in releasing your younger hardwood stands.

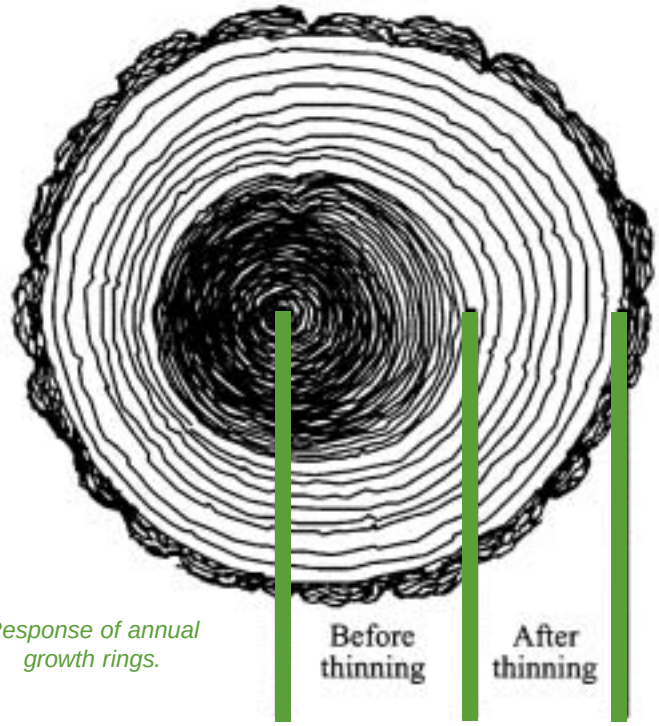


Girdles on a hardwood tree.

Conclusion

Private landowners are beginning to view their hardwood forests as a vital part of their farm assets. Demand for fine-quality hardwood products such as cabinets, flooring, furniture, and veneer has increased and is expected to continue increasing for the foreseeable future. As a result, prices have escalated, causing astute landowners to consider an active rather than an incidental approach to managing their hardwood crops.

The slow growth rates of hardwood trees have long been viewed as an obstacle to forest management. Through minimal investment, CTR is a way to energize your forest. Growth rate is enhanced, forest composition is improved, harvest rotation is shortened, and revived enthusiasm for your forest investment results.



Response of annual growth rings.

Eastern Poison Ivy (Toxicodendron radicans)

Photo by Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database / USDA SCS. 1991. Southern wetland flora: Field office guide to plant species. South National Technical Center, Fort Worth, TX.

PLANTS THAT CAUSE Itching

By ***Kenneth G. Johnson***, Supervising Wildlife Biologist
Wildlife and Freshwater Fisheries Division,
Alabama Department of Conservation & Natural Resources

Atlantic Poison Oak (Toxicodendron pubescens)

Photo by Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database / USDA SCS. 1991. Southern wetland flora: Field office guide to plant species. South National Technical Center, Fort Worth, TX.

Alabama is a diverse state with numerous plants, all of which have value and importance to the ecosystem. However, some of the plants are undesirable or even harmful to humans. Almost any plant may produce hay fever or skin rash in an allergic individual, but there are a small number of plants that cause an irritating itch to most anyone who comes into contact with them. Three of these are native to Alabama: poison ivy, poison oak, and poison sumac.

Poison ivy, poison oak, and poison sumac are closely related. All three are quite common and widely distributed in various growth situations such as hedgerows, thickets, woods, fields, and roadsides. Everyone active in the outdoors should learn to recognize these plants because they are sources of human discomfort. Poison ivy and poison oak are usually easily recognized, but poison sumac is more difficult. Poison sumac is most common in natural thickets and swampy habitat.

During early fall the leaves of all three plants can be red or orange. The leaves vary greatly in size, texture, and degree of "incutting" along the margin, apparently depending on habitat conditions to some degree. Remember that poison oak is woody in older plants and that each leaf is divided into three leaflets. Poison sumac is a tall shrub or small tree. Each leaf is composed of seven to eleven leaflets arranged oppositely along the midview, terminating with one leaflet at the tip. Poison ivy is a vine almost always climbing, and rarely found resting on the ground.

Poison Sumac (Toxicodendron vernix)

Photo by Norman Melvin @ USDA-NRCS PLANTS Database

The tissue fluid of all three plants contains poisonous oil. This oil is found in all parts of the plant and is extremely irritating to the skin. The oil does not vaporize at normal temperatures, so contact with the plant must occur to produce a reaction. However, an exception to this rule does occur: severe cases of poison ivy and oak have been contracted from the droplets of oil in the smoke debris of the plants when burned.

Once in contact, the oil adheres to the skin. It can be removed by washing well with a strong soap as soon as practical after contact (within five or ten minutes if possible). Otherwise, some skin reaction may have already taken place. If a rash develops, the blisters and red itching skin can be treated with dressings of calamine lotion, Epson salts, or baking soda. Severe cases may need medical treatment.

The best way to cope with these plants is to learn to recognize them and stay away from them.

Forest Market Trends for *Alabama*

By ***Bruce Springer***
Management Division Director, Alabama Forestry Commission

Recent indicators show that forestry markets in Alabama continue to be affected by the economic downturn. However, there is some indication that this condition is beginning to improve. The U.S. economy is beginning to rebound and company profits are increasing.

Investors still see forestry as a stable investment as they purchase forestland from industry trying to consolidate and become more efficient. These investors, primarily investment management organizations, see timberland investments as a viable alternative to the stock market that continues to recover. Prices for these lands are somewhat discounted, but are still historically high, especially in the current market.

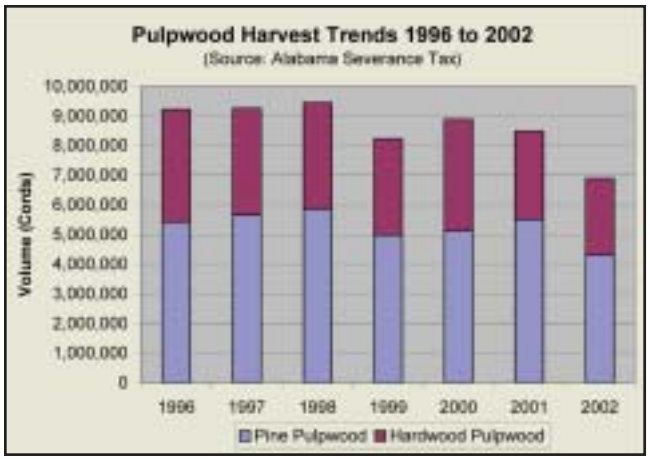
Alabama's commercial forests are growing faster than harvests, and will be able to supply existing as well as new markets, especially those utilizing small diameter wood. If the dollar weakens further it will be cheaper for foreigners to purchase U.S. products, and increased exports would further improve forestry markets. Overall, the forestry sector is in good shape and should respond well as the economic climate improves.

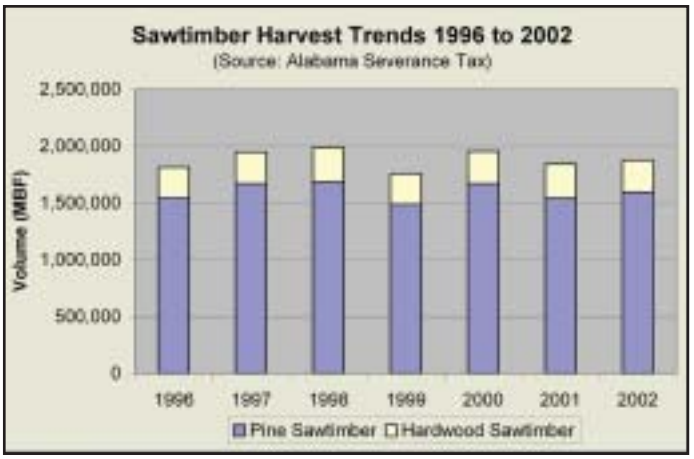
Timber Price Trends

The following graphs show the price trends of timber stumpage for the main forest products harvested and delivered to primary mills in Alabama. These trends are based on *Timber Mart-South* survey results.

Pine pulpwood prices still reflect an oversupply condition with reduced demand. Pine pulpwood prices leveled off in 2002 after dropping to a ten-year low of around $16 per cord. Pine pulpwood will continue to remain weak or slightly decrease, as additional wood from plantations becomes available. Price trends for this material will depend on whether or not new markets are developed. Hardwood pulpwood prices have remained steady and slightly higher than pine for a second year, and averaged around $21 per cord.

Sawtimber prices remain strong as house constructions soar with historically low mortgage rates. However, there is some indication that housing starts may be slowing down. Although sawtimber prices dropped slightly over the last three years, they are still historically strong. Between 2001 and 2002, pine sawtimber gained back some earlier losses to end up at $331 per thousand board feet, *Scribner*. Oak sawtimber rates declined slightly over the last two years to approximately the same level as pine. Rates were fairly equal across the entire state.





Timber Harvest Trends

Timber Mart - South unit rates were applied to the volume of timber harvested (based on timber severance tax receipts) to estimate the stumpage value harvested in 2002.

The total estimated value of stumpage harvested in 2002 is 735.8 million dollars. This is up 2 percent from 2001 harvests. Pine sawtimber harvest value went up 9 percent to 536 million dollars, while pine pulpwood value went down 26 percent to 69.8 million dollars, and hardwood pulpwood value went down 11 percent to 54.5 million dollars. The other main primary products remained fairly steady.

The state maps below show the total stumpage value harvested in 2002 by county and the change in value from the previous year. As shown on the maps, there was a considerable reduction in harvests throughout the central portion of Alabama. Based on this information, the southwest portion of Alabama continues to lead the state in timber harvests.

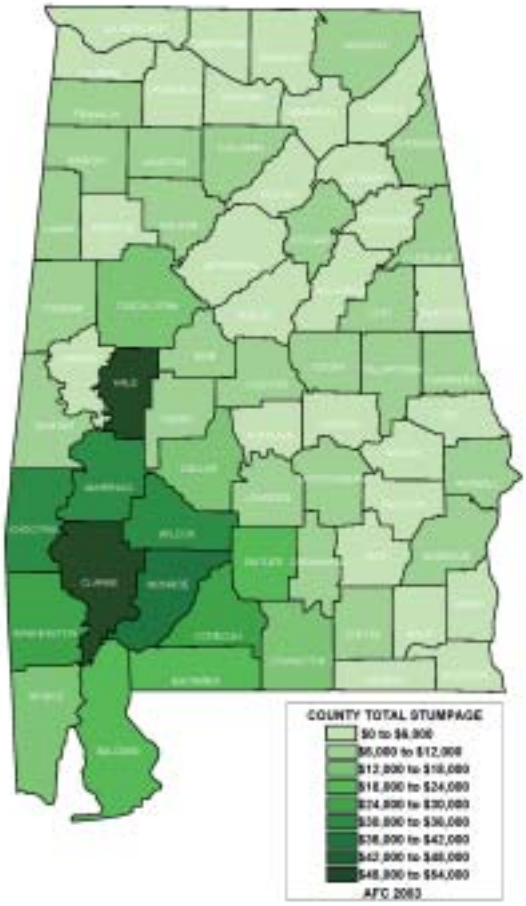
References:

Timber Mart - South; Daniel B. Warnell School of Forest Products, University of Georgia, Athens, Georgia (reprinted with permission).

Alabama Department of Revenue, Severance Tax Receipts.

Wear, D.N. and Greis, J.G. 2002. *Southern Forest Resource Assessment.* General Technical Report SRS-53. Asheville, NC. Department of Agriculture, Forest Service, Southern Research Station. 635 p.

Total Stumpage Value for 2002
(Total per county, reported in Thousand Dollars)



Difference in Total Stumpage Value, 2002-2001
(Total per county, reported in Thousand Dollars)

Tree Shelters . . . Are They For You?

By ***Alan Williams***
Staff Management Specialist,
Alabama Forestry Commission

and

Blake Kelley
Coosa County Manager,
Alabama Forestry Commission

A few short years ago landowners were talking about an oak tree that would produce acorns in five years to ten years, depending on who was telling the story. Excited property owners were calling nurseries, governmental foresters, consulting foresters . . . any source where they thought they might get some of these "magic oaks." As time passed, the sawtooth oak became easier to acquire. Numerous land managers took seedlings to the field and planted them in a variety of schemes and locations. Landowners waited a few years and were disheartened to see that their "magic oaks" didn't produce acorns in the anticipated time frame. A short study of the situation told us that the trees had been planted and forgotten, similar to the mindset of planting pines.

Maintaining a healthy stand of sawtooth oaks is more difficult than simply planting the stand. Hazards facing the newly planted trees include — but are not limited to — plant competition, browse by deer, mice, rabbits, herbicide drifts, insects, etc. If only there were a product that could protect the seedling and accelerate the growth rate. Well, there is . . . it's called the Tree Tube, Tree Shelter, and/or Tree Protector. If properly used, tree shelters will increase growth and survival while protecting the seedlings from numerous pests.

First used in England, tree shelters have now become a common silvicultural tool used around the world. The principle is simple: provide a shield to keep animals and wind out, while allowing light and moisture in. As the tree develops leaves, it forms a canopy inside the shelter, trapping moisture.

When using a tree shelter, you should choose the species of seedlings you are going to use and determine the environmental conditions that may threaten them. For example, hardwoods that are exposed to heavy deer browsing require a four- to five-foot solid wall shelter. The most common causes of seedling loss are animal browsing, wind damage, weed and grass competition, chemical sprays, and drought. Tree shelters have been proven to be very effective in preventing these problems.

Growth is accelerated and survival is increased by using tree shelters.

Any tree shelter used in forestry requires a flared top to prevent bark abrasion as the tree grows from the shelter and begins to rub up against the top of the shelter. Most shelters are designed to degrade after five to seven years. However, they may break down differently depending on the weather and light conditions on your property. Top quality shelters have a laser line that allows the shelter to split if the trunk outgrows the diameter of the shelter. This prevents the shelter from girdling and killing the tree.

Research has shown that seedlings grown in tree shelters have the highest survival rate and increased growth rates, averaging 100-150 percent, with certain species exceeding 500 percent. A seedling with enhanced early growth will always be ahead of a plant of the same age that does not have the growth advantage provided by a tree shelter.

How does a tree shelter provide this enhanced early growth? It provides a beneficial micro-climate for the seedling. A tree shelter pro-

Growth rate is different among trees, as shown here within an approximate 1/10th acre plot. Look closely to see twelve tree tubes in the photo above. Some seedlings have grown above the 4-1/2 foot tube, even with heavy grass competition.

vides increased humidity, higher carbon dioxide levels, reduced drying and mechanical damage caused by wind, and it also reduces harmful ultraviolet light.

I *(Alan)* first used tree shelters approximately seven years ago. The results were hard to believe. I assisted a friend of mine, a landowner in Coosa County, with the establishment of two "wildlife orchards." My friend wanted to plant something beneficial to wildlife on two logging decks used during a recent logging operation on his property. As is common with logging decks on piedmont soils, the soil was compacted by the logging equipment. Both of these logging decks were approximately half an acre in size. We planted about 50 trees on each site for a total of 100 trees: a combination of sawtooth oaks, crabapple, Chinese chestnuts, and hybrid chestnuts. The containerized seedlings were planted during March. Tree shelters, 48 inches high, were installed at the time of planting. In November of the same year both of these wildlife orchards were included on the annual Coosa County TREASURE Forest Landowners Tour. The amazing thing was that on a site with soil compaction and poor site index for hardwoods, most of the seedlings had grown up to or over the tops of the tree tubes. The record was a crabapple with a height of seven feet. This example shows how beneficial tree shelters can be.

Other examples come to mind. A stop on a TREASURE Forest tour in Elmore County also illustrated the benefits of tree shelters. The landowner had planted two adjacent rows of sawtooth oaks in an old cotton field. One row had been planted and left to grow on its own; the second row had tree shelters installed at the time of planting. After approximately five years, the sawtooth oaks without the tree shelters were 3 to 5 feet tall, while those with the tree shelters were 15 to 20 feet tall.

In some counties, tree shelters may be obtained from local nurseries. The Coosa and Elmore County Planning Committees offer the shelters (when available) to local landowners for less than $3.00 each. They may also be obtained from TREESENTIALS at 1-800-284-8239 and TUBEX at 1-800-538-TREE. Prices of tree shelters vary depending on height, manufacturer, quantity, etc. The price range is usually between $1.50 and $6.00 per tube. Purchase a few from different sources and pick the one that best fits your needs.

In conclusion, we believe tree shelters are a necessity when planting certain hardwood seedlings. The increased growth and survival more than offset the cost of the shelters. If the aforementioned factors are important to you . . . USE A TREE SHELTER.

For more information contact your local Co-Operative Extension System office, Alabama Forestry Commission county manager, or a Department of Conservation and Natural Resources wildlife biologist.

Wildlife Biologist Brian Walker inspects healthy four-year-old sawtooth oak. The manufacturer recommends removal of tree shelters only after the plastic begins to crack or degrade.

Some landowners prefer the use of metal over wooden support stakes, as the wood generally tends to rot within a year.

20th Annual

Alabama Landowner & TREASURE Forest Conference

"FOCUS ON OUR FAMILIES"

October 23 – 24, 2003
Florence Conference Center

Thursday, October 23

Lunch and Tour of Roberson Family Farm in Rogersville

- Fertilization: Does It Pay?
- Hardwood Management and Marketing
- Wildlife Management in a Young Forest
- "A" and "R" are for Aesthetics and Recreation
- *From Farm to Forest:* Focus on the Roberson Family

Awards Banquet followed by dessert reception

Friday, October 24

Indoor Session Topics run consecutively:

- The American Chestnut Tree
- Invasive Plants and Animals
- Attracting and Watching Non-game Bird Species
- Alabama's Forests Long Ago
- Native Plants for Medicinal Purposes

Followed by Alabama TREASURE Forest Association Luncheon

Exhibit Space is Available – Contact ATFA 1-888-240-4694 for information.

Continuing Education Credit is available for registered foresters and PLM Loggers.

Check out dozens of unique and exciting items in the
7th Annual Silent Auction
sponsored by the *Alabama TREASURE Forest Association!*
Bids will be accepted until noon Friday & items awarded to the winners that afternoon.

PLEASE USE FORM ON OPPOSITE PAGE TO REGISTER FOR CONFERENCE

20th Annual Alabama Landowner & TREASURE Forest Conference

REGISTRATION FORM

Name of Attendee(s): **Email address:** (if applicable)

1. _____ _____
   ❑ Yes ❑ No *I will attend Thursday's tour.* ❑ Yes ❑ No *I am a forest landowner.*
2. _____ _____
   ❑ Yes ❑ No *I will attend Thursday's tour.* ❑ Yes ❑ No *I am a forest landowner.*
3. _____ _____
   ❑ Yes ❑ No *I will attend Thursday's tour.* ❑ Yes ❑ No *I am a forest landowner.*
4. _____ _____
   ❑ Yes ❑ No *I will attend Thursday's tour.* ❑ Yes ❑ No *I am a forest landowner.*

Company/Agency Name: _____

Address _____

City _____ **State** _____ **Zip** _____

Enclosing $65.00 registration each for _____ **attendee(s) = TOTAL $** _____

- Registration includes tour, lunch, and banquet on Thursday; sessions and luncheon on Friday.
- $65.00 registration if **postmarked by October 9th**, $75.00 registration *after* October 9th. *No refunds after October 16th.*
- Make checks payable to THE ALABAMA FORESTRY PLANNING COMMITTEE.
- Detach & mail upper portion to Fran Whitaker, Alabama Forestry Association, 555 Alabama Street, Montgomery, AL 36104. Email fwhitaker@alaforestry.org, Phone (334) 265-8733 or Fax (334) 262-1258.

✂----------*Retain this lower portion for your information*----------

CONFERENCE INFORMATION

Thursday, October 23

9:00 a.m. Registration begins in lobby of Florence Conference Center.
10:30 a.m. Buses load and depart for tour of Roberson Family Farm. No private vehicles allowed. Lunch provided at tour. Please dress appropriately & wear comfortable shoes.
6:45 p.m. Awards banquet followed by dessert reception.

Friday, October 24

8:00 a.m. Indoor programs presented consecutively in Ballroom. Followed by Alabama TREASURE Forest Association Luncheon.

Lodging

Three hotels within two miles of the Conference Center have a limited number of rooms reserved at special rates: Comfort Inn, telephone 256-740-0444, Hampton Inn, telephone 256-764-8888, and Jameson Inn, telephone 256-764-5326. Please mention the TREASURE Forest Conference when making reservations.

Bibb County Couple
Honored with Bill Moody Award

By ***Coleen Vansant***
Information Manager, Alabama Forestry Commission

When the names of Dan and Romaleta James were called last year at the Alabama Landowner and TREASURE Forest Conference as winners of the prestigious Bill Moody Award, it was a huge surprise for the Bibb County couple. According to Dan, "I was speechless." Later, Gary Fortenberry told him it was the first time since he had known him that he was speechless.

"Before, I had looked up to, admired, and respected everyone that had won the award, and for me to be placed on the same plateau with them is incomprehensible," Dan says. "It was undoubtedly the highest award I have ever received and I was truly humbled by it."

The Bill Moody Award has been presented each year since 1996 by the Alabama TREASURE Forest Association (ATFA) at the Alabama TREASURE Forest and Landowner Conference. It is given to honor individuals and/or groups who have made significant contributions to the advancement of the TREASURE Forest Program and the Alabama TREASURE Forest Association. The award is given in honor of Bill Moody who served 23 years with the Alabama Forestry Commission as State Forester. He is considered by many to be the "father" of the TREASURE Forest Program. His vision was to help Alabama landowners become better informed and better stewards of their land. This idea became the foundation for the TREASURE Forest Program. He also knew that there must be coordination among the state agencies to help landowners manage their forests. This resulted in the Alabama Forestry Planning Committee. Later he saw the need for landowner input to the state forester about issues and problems they faced. This lead to the creation of the State Foresters Advisory Board that later became the Alabama TREASURE Forest Association.

Dan and Romaleta James, winners of the "Bill Moody Award" at the 2002 Alabama Landowner and TREASURE Forest Conference.

Dan and his wife Romaleta were certified as TREASURE Forest owners in May of 1986 *(TREASURE Forest #385)*, and they were winners of the Helene Mosley Award later that year. Both are members of the Alabama TREASURE Forest Association and Dan has served as its director and president. Dan has been a member and is currently president of the International Wood Collectors Society.

Dan has been active in most of the local farm organizations including the Bibb County Farm Bureau, Agricultural Stabilization and Conservation Service, Bibb County Soil and Water Conservation District, Bibb County Farmers Federation, as well as the Tombigbee Resource Conservation and Development Council. On the state level, Dan has served as state president of the Alabama Association of Conservation Districts, Chairman of the Alabama Tree Farm Committee, and Vice President of the Advisory Board of the Alabama Cooperative Extension System.

Romaleta is the recording secretary for the Bibb County Farmers Federation Board of Directors and a member of the ALFA Women's Committee. She is a member of both the Women of Agriculture team and the Bibb County Farm-City Week Committee. She is also one of the forces behind the ATFA Silent Auction held each year at the landowner conference.

The Bill Moody Award was first given in 1996 when the selection process for the Helene Mosley Memorial TREASURE Forest Award was changed from one winner and two runners-up to four regional winners. That year, the award was presented to Dr. Emory Cunningham, who was one of the three regional Mosley winners.

The following year, the criterion was changed. The award would not be presented to one of the four regional Helene Mosley winners, but to an individual or group who had contributed to the program or to ATFA. Each acknowledgement presented in honor of the award has a special connection to ATFA and involves woods that are native to Alabama. When the award was first conceived, Dan and Romaleta James felt strongly that it should carry with it a distinct and unique acknowledgement of service rendered. They have furnished the acknowledgements every year since 1997 and each award is individual and unique.

The recipient of the award in 1997 was W. Kelly Mosley for his outstanding and significant contribution to the TREASURE Forest Program and ATFA. His generosity has helped promote stewardship by recognizing and rewarding those individuals who have set the highest example of what the TREASURE Forest philosophy aspires to convey.

In 1998 the award was presented to Jerry Johnson, state staff forester for Natural Resources Conservation Service in Auburn. His support of forest landowners and ATFA, combined with his early involvement in the development of the TREASURE Forest Program standards, helped strengthen a foundation for good forest stewardship in Alabama.

State Forester Timothy C. Boyce received the 1999 award. His involvement in the development and implementation of the TREASURE Forest Program and his long-term commitment to supporting landowners and the Alabama TREASURE Forest Association has been a cornerstone for the success of both.

In the year 2000, the Bill Moody Award was presented to Larkin Wade, retired Alabama Cooperative Extension System forester for Auburn University. Larkin supported the TREASURE Forest Program and has been a member of the Alabama Forestry Planning Committee since its inception.

Steve Guy was the recipient of the 2001 award. Steve is a registered forester that serves as statewide Director of the Forestry, Soybean, & Wildlife Resources Division and Director of Environmental Affairs for the Alabama Farmers Federation. This position provides direction, service, and organization to many forest landowners across Alabama. Also, Steve was a management forester with the Alabama Forestry Commission during the agency's inception of the TREASURE Forest Program, serving as its statewide coordinator. He is a longtime member of the Alabama Forestry Planning Committee.

The 2003 Bill Moody Award will be presented during the Alabama Landowner and TREASURE Forest Conference to be held October 23-24, 2003, at the Florence Conference Center. See pages 16-17 of this issue for more information and registration material.

Visit the AFC Web Site:
www.forestry.state.al.us

Legislative Report

The Alabama Forestry Commission is committed to bringing the readers of *Alabama's TREASURED Forests* magazine information in all areas that affect forestry, landowners, and fire. Whether or not legislation is passed or amended is sometimes crucial to the Commission as an agency, as well as rural volunteer fire departments and forest landowners across the state.

In order to bring you general information, *Alabama's TREASURED Forests* will take this space to feature different committees or people in the legislature and the status of important bills that are being considered. This segment will also be used to bring you information on legislation on the national level that might affect forestry in Alabama.

The two committees featured here are significant to the Alabama Forestry Commission and its programs. Both consider legislation that is sometimes vital to the Commission's forest management and fire programs, private non-industrial landowners, forest industry, and rural fire departments.

House of Representatives

Agriculture, Forestry and Natural Resources Committee: Chair – Thomas Jackson (Dem/District 68); Vice Chair – John Robinson (Dem/District 23); and Ranking Minority Member – Greg Albritton (Rep/District 64). Members are Billy Beasley (Dem/District 84), Warren Beck (Rep/District 87), Lucius Black (Dem/District 71), Joe Carothers (Dem/District 86), Tommy Carter (Dem/District 5), Spencer Collier (Rep/District 105), Rusty Glover (Rep/District 102), Micky Hammon (Rep/District 4), Allen Layson (Dem/District 61), Yusuf Salaam (Dem/District 67), Bobby Singleton (Dem/District 72), and Cam Ward (Rep/District 49).

Senate

Agriculture, Conservation and Forestry Committee: Chair – Zeb Little (Dem/District 4); Vice Chair – Jack Biddle III (Rep/District 17); and Floor Leader – Jeff Enfinger (Dem/District 7). Members are Tom Butler (Dem/District 2), Bobby Denton (Dem/District 1), Henry E. "Hank" Erwin (Rep/District 14), Jimmy Holley (Dem/District 31), Hinton Mitchem (Dem/District 9), H. E. "Hap" Myers (Rep/District 34), Myron Penn (Dem/District 28), Charles Steele, Jr. (Dem/District 24), and Gary Tanner (Dem/District 35).

Measuring Distance and Computing Area

By: ***Douglas A. Smith***
Fire Operations Officer, Alabama Forestry Commission

In the last three issues of *Alabama's TREASURED Forests*, we've featured a series of articles discussing the measurement of direction. These previous articles included factors associated with "North," "Angles of Azimuth and Bearing," and using lines of "Direction" to locate places on a map.

Let's now look at measuring "Distance." A few hundred years ago, the French desired to establish a worldwide standard for all measurements. The purpose was to facilitate trade and price. One such measurement was for distance, the *meter*, on which the *metric system* was based. The meter was defined as one ten-millionth (1/10,000,000) the distance from the North Pole to the Equator as measured in Europe. Even though Napoleon later rejected this system, it finally became the standard for much of the world. Thomas Jefferson wanted to use it for the American standard as well; but this idea failed, primarily because the English standard had already become established among most all the people of the "New World."

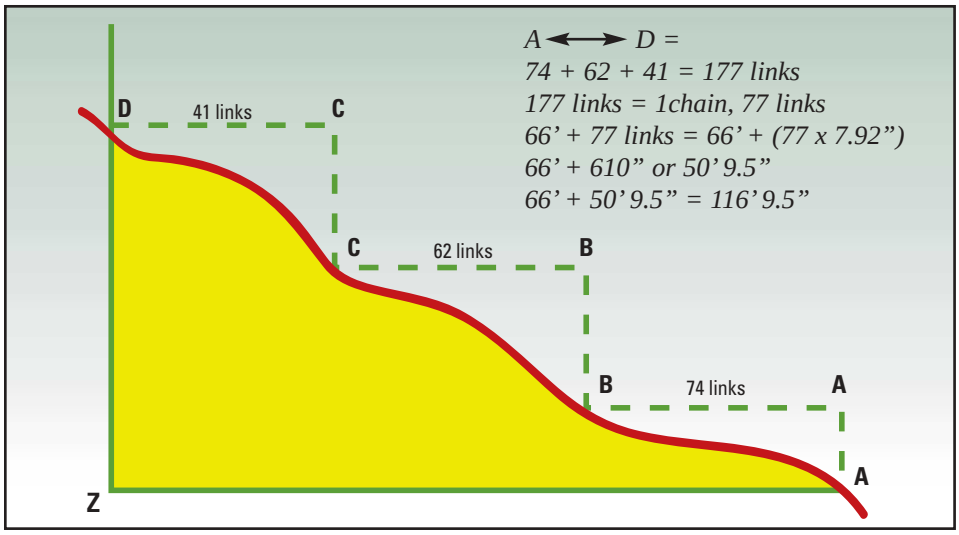


Figure 1 A to Z is the same distance as A to B + B to C + C to D. However, the horizontal distance is shorter than A to D as measured along the surface of the earth. Since the entire length of the chain/tape cannot be used horizontally on the slope, segments called "breaking the chain/tape" are added together.

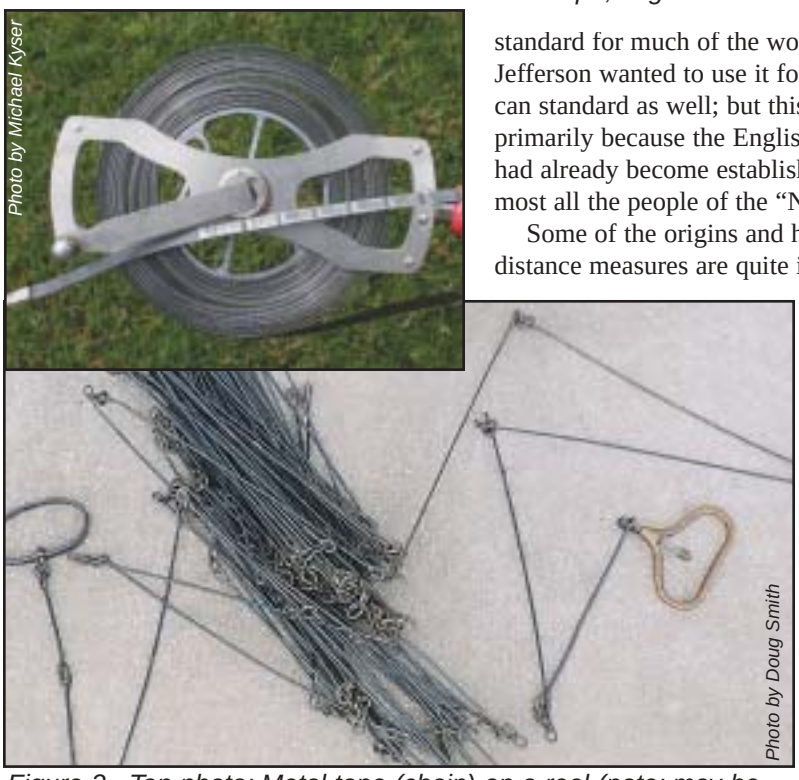


Photo by Michael Kyser

Photo by Doug Smith

Figure 2 Top photo: Metal tape (chain) on a reel (note: may be metal or fabric). A link on one end is graduated and marked with ten divisions for increased accuracy. Bottom photo: Example of a Gunter's Chain. A surveyor's chain = 66 feet = 100 links, therefore one link = .66 feet = 7.92 inches.

Some of the origins and history about distance measures are quite interesting:

- A *cubit* is the distance from the fingertips to the elbow. Noah's Ark was 300 cubits long.
- A *rod* or *pole*, used to drive oxen, was about 16 feet long and was handy for measuring land since it was the longest, usable tool commonly available to a farmer. The length later became an official 16 ½ feet when the British Empire decreed it to be the combined lengths of the left feet of the first 13 men exiting a certain English church on a designated day.
- A *foot* was the length derived from the end of the toe to the rear of the heel of the foot. It probably fell to kings or tribal leaders to declare the standards.
- The *mile* originated from having Roman soldiers march with a step of 2 ½ feet: one mile was declared 1,000 paces or 5,000 feet.
- The *furlong* was defined as the length of one side of a square ten-acre field, or 660 feet. In the 17th century, Queen Elizabeth decreed one mile equal to eight furlongs or 5,280 feet or 320 poles.

Regardless of the units of measurements – be they English, Metric, or other — all distance measurements associated with travel and area determinations must be made on a horizontal plane! Notice in

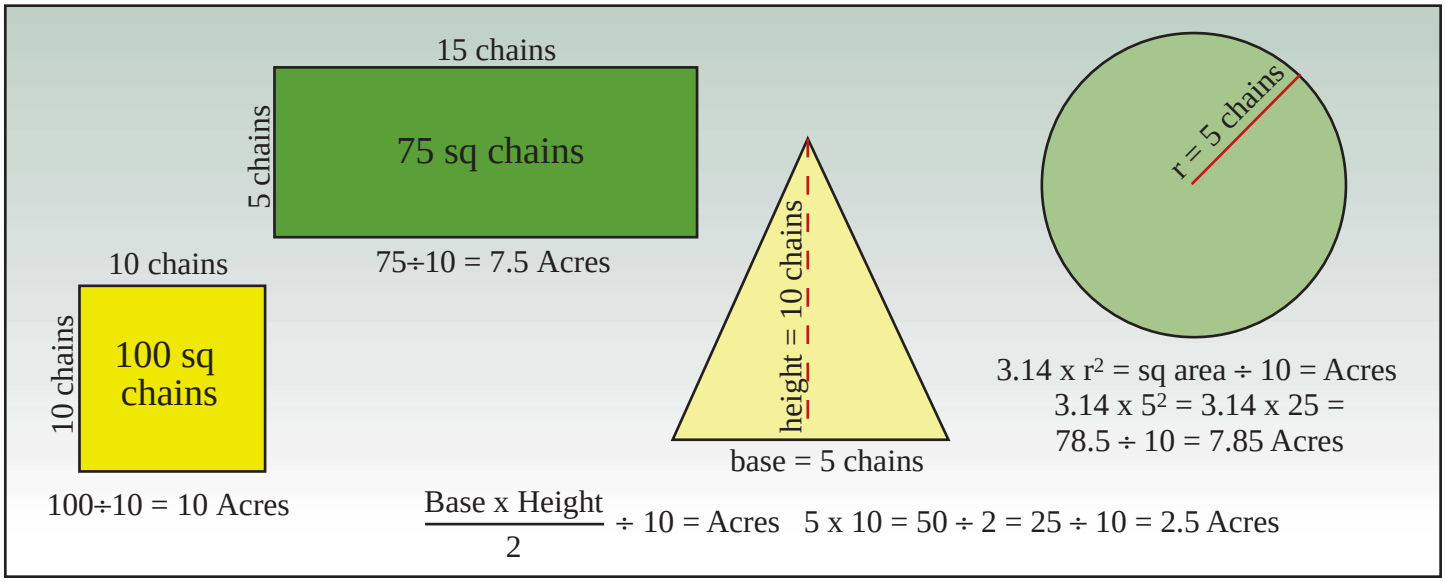


Figure 3

Figure 1 that you may own a lot of surface area on the side of a steep hill but not a relatively equal amount of distance.

The English mathematician, Edmund Gunter, developed a tool to measure distances in lengths that would easily convert to the mile or the acre. He figured that a 66-foot *chain* would not only be an even part of the mile (1/80), but ten square chains would be one acre. By dividing the chain into 100 equal parts or links, the chain became a fairly accurate measuring tool for that period (1600-1800). The linked chain could be folded for convenient storage. Later versions came in the form of a steel tape with the links stamped in the metal. The tape could be rolled on a spool, or with a little training, could be "thrown" into a relatively small circle for storage. Later versions were produced on non-stretchable fabric that was lighter and easier to handle. The steel chain or tape was commonly one chain long in order to stretch it tight on the horizontal. However, two chain lengths were also common for relatively flat terrain. See Figure 2.

Pacing is a rough measurement of distance. Measure a chain on the ground. Walk from one end to the other and count your steps. You can then use this as a field tool that is always available. Averaging your pace of a longer distance and variety of slopes will give you an even better estimate of your individual pace. Start by stepping off with your left foot and count only every other step (each time your right foot strikes the ground). This makes remembering the count much more easy. Frequently check your pace count to ensure accuracy.

If you walk/pace the distance of a chain and your right foot strikes the ground twelve times, then you have twelve paces per chain. Now step 48 paces and you have gone 4 chains. Note that 120 paces will be 10 chains, which is significant because 10 square chains equals one *acre*.

Let's now use our distance knowledge to compute *area* in acres. The following four examples are shown in Figure 3.

a) If you pace a square that is 10 chains long on a side, the figure contains 100 square chains. There are 10 square chains per acre, so divide 100 by 10 to get 10 acres.

b) Suppose your tract of land is a rectangle and you pace or measure a width of 5 chains and a length of 15 chains. The area of a rectangle is L x W, thus 5ch x 15ch equals 75 square chains. Therefore, 75 square chains divided by 10 square chains per acre produces an area of 7.5 acres.

c) What if your property is the shape of a triangle? Pace the base and height, use the formula ½ Base x Height, and divide that by 10 to calculate the acres.

(Continued on page 22)

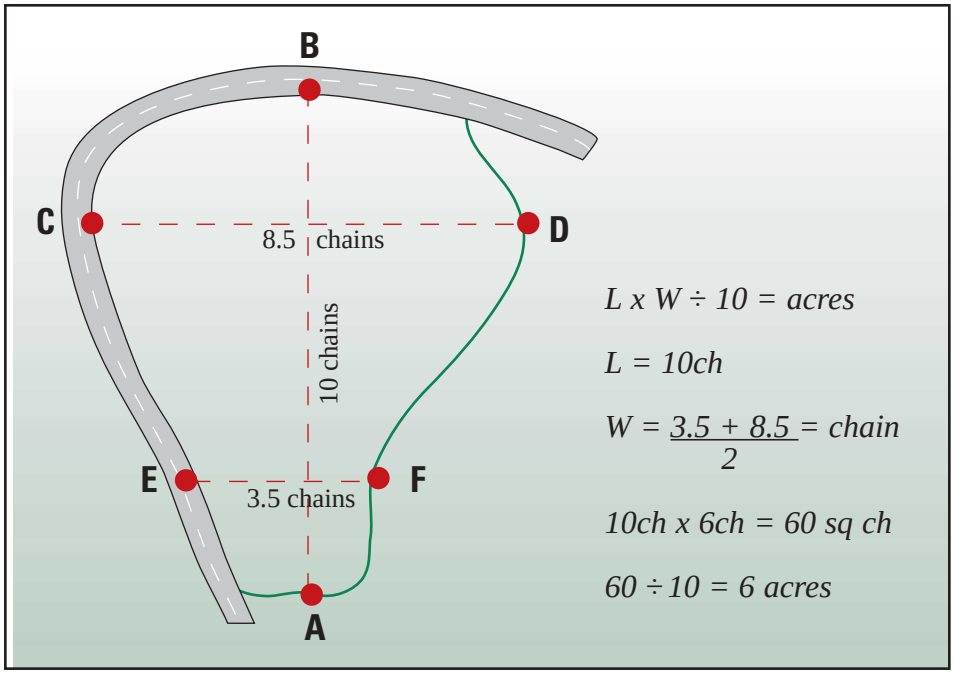


Figure 4

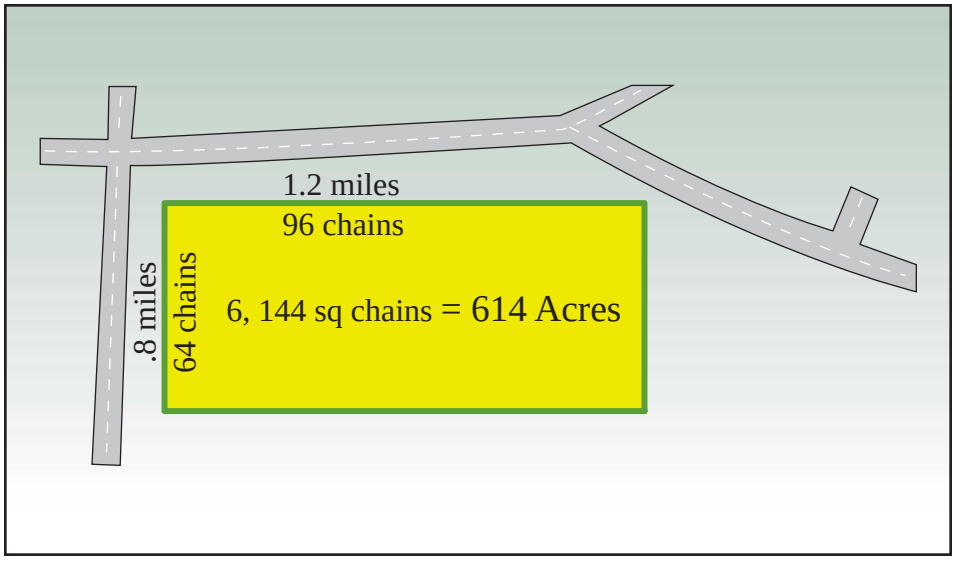


Figure 5

d) Imagine your property is a circle. Pace the radius (r) of the property and use the formula: $A = \pi r^2$ (or, Area equals 3.14 times the radius squared). After getting that area, divide by 10 to get acres.

The next example is for an irregular area, shown in Figure 4. The answer is an approximation but may be close enough for your need. Pace the length A-B. Since the width varies, pace it at two representative points, E-F & C-D. Average those two distances and multiply that times the length. Divide the answer by 10 to produce acres.

The example in Figure 5 may be measured by vehicle. Drive by a large open field. Check the odometer to find it is 1.2 miles long. In our example, you drive another side and measure it as .8 miles long. There are 80 chains to the mile so the lengths now compute to 96 chains and 64 chains. [96ch x 64ch = 6,144 square chains.] Divide that by 10 to get 614 acres. A quick mental check tells us we are correct since one square mile equals 640 acres and our measured area is approximately one square mile.

When traveling a compass direction, whether for just getting to another location or measuring area, think about "directional error" versus "distance." If your line of travel is off by one degree and you travel one mile (80ch or one section), you will miss your target by approximately 92 feet. Accuracy is not only important in direction, but becomes multiplied when used in area computations.

This final paragraph includes additional area information. Figure 6 depicts a *Township* that is 6 miles by 6 miles, or 36 square miles. That is the same as 36 *Sections* of land. The sections are numbered starting at the NE corner in the pattern shown in the example.

Figure 7 divides a square mile/section into 16 equal squares that produce the commonly expressed 40 acres, or an area that is 20ch by 20ch.

Figure 8 includes additional area computations.

Author's Note: Thanks to Robert Wiggins for some of the research included in this article.

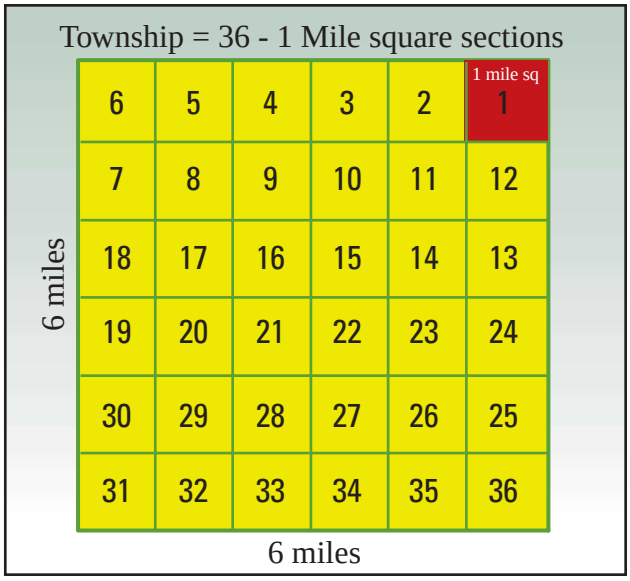


Figure 6

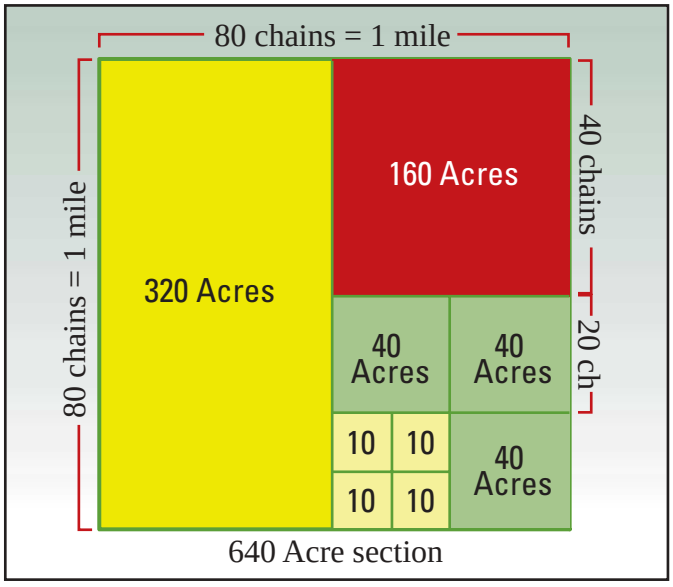


Figure 7

Section

1 mile = 5,280 ft
1 Section = 1 mile x 1 mile
5,280 ft x 5,280 ft = 27,878,400 sq ft
27,878,400 sq ft ÷ 43,560 sq ft/acre = 640 acres

1 mile = 80 chains
80ch x 80ch = 6,400 sq ch
6,400 ÷ 10 sq ch/acre = 640 acres or one section of land

Figure 8
Use the computation that has the most value to you.

HIDDEN TREASURES

Childhood Memories

By ***LaKedra C. Byrd***
Southwest Outreach Forester, Alabama Forestry Commission

During the Civil War, Mrs. Mary Hope's property located in Thomaston (Marengo County) Alabama was called the Eaton's Place. This land was an old cotton field that her ancestors, who were formerly slaves on the property, inherited from their owners.

Mrs. Hope's mother was a native of Marengo County and her father was a native of Perry County. As a child, her family moved to Birmingham so that she could receive a quality education. Her grandmother and great-grandmother remained on the family property. To help these ladies manage the land, tend the crops, and do chores they could not do, her parents would travel between Birmingham and Marengo County each week. Her father planted enough crops (corn, wheat, watermelon, muscadines, and other fruit and vegetables) to last throughout the winter for the family and neighbors in the community. Mrs. Hope remembers reading and playing games under a very large oak tree while her parents tended the farm and planted the most beautiful flowers in the garden.

After graduation, Mrs. Hope taught school at the Fairfield Institute in Fairfield (near Birmingham) and was named director of the Science Department. Later, after marrying and moving to New York, she taught in the New York School system. She subsequently moved to Boston and served as Dean of Student Affairs at Massachusetts Institute of Technology for twelve years. Mrs. Hope was an educator for more than forty years.

While living up North, Mrs. Hope visited Alabama at least five or six times a year. She said, "No matter where I live, Alabama is always home."

Following her mother's suggestion, Mrs. Hope contacted the Alabama Forestry Commission for management advice. She and Alan Black, former Marengo County Forester, established a great relationship. He told her about the different cost share programs and even looked after her property since she was an absentee landowner. He gave her tips as to how to become a good steward of the land. Mrs. Hope traveled often, so in the early 1980's she chose to grow timber as it was less confining. Her very first planting was nine acres. Since then, she has had three additional plantings. She received cost-share assistance under the FIP (Forestry Incentive Program). In addition to the planting of timber, many other tasks have been completed on this farm including wildlife management.

Mary Hope as a young girl on the farm (top left); after graduating from Alabama State (top right); and now.

Kenneth Leslie, the present Marengo County Forester, sparked Mrs. Hope's knowledge about the TREASURE Forest Program. He completed a TREASURE Forest Management plan on her 81 acres, and with his assistance she was certified as a TREASURE Forest landowner on September 18, 2001.

Her future plans are to landscape the home site and plant wildflowers, ornamentals, fruit trees, and a rose garden. She truly wants to return the homeplace as she remembers it from her childhood. She also wants to put the property back into production and do better land management. Mrs. Hope simply wants to enjoy God's beautiful creation. One of her sayings is, "God doesn't make any more land, we need to take care of what He has given us." And that is exactly what she is doing. She takes pride in owning and maintaining the property because of the unique way it was obtained by her ancestors. They were able to maintain it during a period of economic distress. Mrs. Hope retains the original deed to the land given to her grandmother back in 1916, as well as pictures of her ancestors who lived on the property.

Mrs. Hope now resides in Birmingham in the house that her mother built. She still enjoys trips to the farm with her daughters when she is not traveling. Her 96-year-old cousin, Josephine McClain, is the oldest member of their family and even now resides on the property. Mrs. Hope enjoys spending time with her and listening to her tell stories from the past. She also loves to watch the children in the community playing and enjoying the land, making their own memories.

Weather Lore – Part 2:

Photo by Herbert A. "Joe" Pase III, Texas Forest Service, www.insectimages.org

Did you know that a katydid's song can tell the temperature?

"Wooly Worms & Bellowing Cows – Shaggy Horses & Hoot Owls"

Predicting Weather the Old-Fashioned Way

By ***Coleen Vansant***
Information Manager, Alabama Forestry Commission

For most people in today's world, weather is simply an annoyance. We don't pay much attention to a beautiful weather day, but we glue ourselves to the television to see if it will be too wet to play golf, plow the garden, or cook out — or if it will be too cold to pour concrete, go camping, or plan a fishing trip.

For thousands of years man has monitored the weather. From the beginning of mankind he has watched the skies, the seas, animals, insects, and plants for signs of changes in the weather. Where bad weather may only be an inconvenience or a topic of conversation to us today, it meant much more to generations before us. Knowing what the weather was going to do meant the difference in prosperity and poverty, comfort and discomfort, or health and sickness. For our ancestors, not knowing what the weather would do tomorrow, next week, or the next season could mean either total success or utter failure for man and his family.

The previous segment of this story (see *Spring 2003*) dealt with how man over the centuries has depended on the heavens and other elements to predict the weather. Part two of the story will explain how animals, insects, and plants have been relied upon to indicate changes in the weather.

What the Animals Tell Us

Each year on the second day of February, the entire nation looks to the small town of Punxsutawney, Pennsylvania for the results of an event that affects us for the next six weeks. Since 1886, Punxsutawney Phil, a groundhog, has come out of his winter burrow on this day to tell the nation if spring will be early or late. If it is cloudy and Phil does not see his shadow, it will be an early spring. If it is a bright, sunny day and he does see his shadow, spring will be another six weeks away.

Although this sounds silly to many people, it is an example of how man has depended on animals to give him both a short and long range forecast of what Mother Nature is going to do. During the recent earthquake in North Alabama, many people reported bizarre behavior from their animals shortly before the quake was felt. People have also reported this same behavior from animals before a tornado. Listed below are just a few animal indicators of the weather.

It will be a bad winter if:

Squirrels accumulate large stores of nuts.

Beavers build heavier lodges than usual.

Squirrels' tails grow bushier.

Animals grow thicker fur (horses, cows, dogs, sheep, etc.)

Cows' hooves break off earlier.

Squirrels build their nests low in trees.

Animals grow a short fuzzy coat under their regular one.

Crows gather together.

Hoot owls call late in the fall.

Screech owls sound like women crying.

Rain, storms, and other bad weather are predicted:

If a cow bellows three times without stopping, rain will come a hopping.

If an owl hoots on the east side of a mountain, there will be bad weather.

Horses run fast before a violent storm or before windy conditions.

Pigs gather leaves and straw before a storm.

If the bull leads the cows to pasture, expect rain; if the cows precede the bull, the weather will be uncertain.

Expect rain and/or severe weather if dogs eat grass.

When the rooster goes crowing to bed, he will rise with a watery head.

Redbirds and bluebirds chatter when it's going to rain.

If cows in a field are lying down, rain can be expected within 12 hours.

When fish break water and bite eagerly, expect rain.

If a dog pulls his feet up high while walking, a change in the weather is coming.

If a dog starts to whine for no reason, you can expect a major storm.

Wild geese fly high in pleasant weather and fly low in bad weather.

Ducks quack loudly before a rain.

If a rooster crows at night, there will be rain by morning.

Listening to the Insects

Although insects are not always the most wanted thing around a home or yard, you may want to wait, watch, and listen before you get the fly swatter or call the bug man. For thousands of years these creepy crawlers have been as good as weather radar for mankind.

It will be a bad winter if:

Hornets and yellow jackets build their nests heavier and closer to the ground than usual.

There are a lot of spiders, frost worms, and black bugs about.

Crickets are in the chimney.

It will be a long harsh winter if wasps build their nests high.

If ant hills are high in July, winter will be snowy.

Three months after the first katydid begins "hollerin'," the first killing frost will come.

When butterflies gather in bunches in the air, winter is coming soon. If they migrate early, winter will be early.

If ducks or drakes their wings do flutter high
Or tender colts upon their backs do lie,
If sheep do bleat, or play, or skip about,
Or swine hide straw by bearing on their snout,
If oxen lick themselves against the hair,
Or grazing kine to feed apace appear,
If cattle bellow, grazing from below,
Or if dogs' entrails rumble to and fro,
If doves or pigeons in the evening come
Later than usual to their dove-house home,
If crows and daws do oft themselves be-wet,
Or ants and pismires home a-pace do get,
If in the dust hens do their pinions shake,
Or by their flocking a great number make,
If swallows fly upon the water low,
Or wood lice seem in armies for to go,
If flies or gnats, or fleas infest and bite,
Or sting more than they're wont by day or night,
If toads hie home, or frogs do croak amain,
Or peacocks cry,
Soon after look for rain!

— *Author Unknown*
(but sounds a wee bit Gaelic)

The woolly worm has many stories to tell about the weather:

It's going to be a bad winter if there are a lot of them crawling about; if he has a heavy coat; or if the black band on his back is wide.

If he's black in front, the bad weather is to come; if he's black behind, the worst weather is past.

If he's brown at both ends and orange in the middle, the winter will be mild.

Other insect-related weather predictions:

Locusts sing when the air is hot and dry.

Crickets chirping loudly indicate a pleasant day to follow.

Spiders will spin thicker, bigger webs when the weather is going to be dry.

Ants are busy, gnats bite, crickets sing louder than usual, spiders come down from their webs, and flies gather in houses just before rain and possible severe storms.

Learning from the Plants

Although much of our food and fiber is derived from plant material, our ancestors were particularly dependent upon the local foliage. Both domestic and wild plants gave them food, shelter, medicines, tools, and transportation, as well as being a very important weather indicator.

It will be a bad winter if:

Blackberry blooms are especially heavy.

Carrots grow deeper in the ground.

Grapes, cockle burrs, and apples mature early.

Sweet potatoes have a tougher skin.

Onions grow thicker layers.

Trees are laden with green leaves late in the fall.

Hickory nuts have a heavy shell.

There's a heavy crop of berries, acorns, and pinecones.

Bark on trees is thicker and heavier on the north side.

Leaves shed before they turn.

Moss grows heavy on trees.

Corn shucks and silk grow thicker, and the shucks grow tighter.

The darker green the grass is during the summer, the harder the winter.

If fruit trees bloom in the fall, the weather will be severe the following winter.

(Continued on page 26)

Predicting Weather the Old-Fashioned Way

(Continued from page 25)

The following plant lore predicts impending rain:

Flowers close their petals up.

Sap from the maple tree flows faster.

The daisy shuts its eye.

Flowers smell more fragrant.

The milkweed closes its pod before a rain.

The pitcher plant opens wider before a rain.

Resources:

http://www.reearthing.com/newpage2.htm
http://wv.essortment.com/weatherfolklore_ruao.htm
http://members.aol.com/Accustiver/wxworld_folk.html
http://www.meds-sdmm.dfo-mpo.gc.ca/cmos/weatherlore.html
http://www.wrgb.com/wx/research/research.asp?Selection=folklore
http://ashevillelist.com/weather_folk_sayings.htm
http://www.carolina.com/earth/weather_folklore.asp?print=yes
http://www.stormfax.com/wxfolk.htm
http://ncnatural.com/wildflwr/fall/folklore.html
http://www.chestnut-sw.com/lore.htm
http://www.stalkingthewild.com/weather.htm
The Foxfire Book, Anchor Books, 1972, New York

Weather Experiments You Can Try On Your Own!

Rhododendrons have the unique ability to act as temperature gauges. As the air temperature rises, their leaves begin to unfurl.

- *At 60°F and above, the leaves are fully open.*
- *At 40°F, the leaves are about one quarter closed.*
- *At 30°F, the leaves are about half closed.*
- *At 20°F or below, the leaves are completely closed.*

You can determine the temperature by counting the chirps of a cricket. Count the number of times a cricket chirps in 14 seconds. That number plus 40 will give you the temperature in Fahrenheit to within one degree. Example: 20 chirps + 40 = 60°F.

Or, count a cricket's chirps for one minute, add 100, then divide the total by 4. The result will give you a rough idea of the temperature. Example: 200 chirps + 100 / 4 = 75°F.

Put a pine cone outside where you can observe it. Watch how it changes when the humidity increases. It will close up in moist weather to protect the seeds.

A katydid's song gives the following temperatures:

"Kay-tee—did it" 78°F
"Kay-tee—did" 70°F
"Kate-tee" 62°F
"Kay-tee—didn't" 74°F
"Kate-didn't" 66°F
"Kate" 58°F.

Photo by Coleen Vansant

Many people say that animals exhibit bizarre behavior just before an earthquake or storm.

Ron Singer/U.S. Fish & Wildlife Service

The Humorous But Hungry River Otter

Richard Tharp, Wildlife Biologist
Wildlife & Freshwater Fisheries Division
Alabama Dept. of Conservation & Natural Resources

The river otter, *Lutra canadensis*, is probably the most playful member of the family *Mustelidae*. These animals seem to enjoy making a game of all activities. This family is also widely known for its ability to discharge scent from anal glands.

The river otter is found throughout all of Alabama, from the hilly regions of the north to the coastal marshes of extreme south Alabama. We naturally associate otter populations with aquatic habitats: rivers, creeks, ponds, and swamps are some of the areas to find these critters. However, a fact not widely known is that otters also inhabit marine environments, so locating an otter along our coastal marsh area is a distinct possibility. They prefer an unpolluted drainage and minimal human contact. Although normally aquatic creatures, otters will travel many miles over land to find other suitable habitats.

Otters are powerful swimmers, propelled through the water by webbed hind feet. Their keen ability to move acrobatically in the water is a result of a torpedo-shaped body and a long, muscular tail. Otters can stay submerged up to eight minutes. They are primarily nocturnal, which accounts for people locating otter signs, but not the animal itself. They are active during daylight however, in areas that are undisturbed. About one-half of an otter's life is spent sleeping. Feeding and social play also account for a high percentage of an otter's life. Both adult and young appear to enjoy these times of activity. Wrestling, dunking, playing hide and seek, and mud sliding are favorite activities noted in these interesting animals. The vocalization of otters can best be described as growls, whines, and chirps.

River otters are solitary animals but are at times found in family groups. The otter is sexually mature at two years of age. Breeding season occurs in late winter to early spring. Like other members of the family *Mustelidae*, they exhibit delayed implantation of fertilized eggs. After a period of arrested development, the egg implants in the uterine wall and normal development occurs. The average litter is two. The mother cares for the young, which are born blind and helpless. Around six months of age, the family unit is broken and the young move on, looking for territory to call home.

These animals use "toilets," a specific area where the animal defecates. A common site in otter territory is small piles of mud and debris. These "scent mounds" are normally the recipient of urine and scent. This action aids in territorial marking.

As one would expect, the primary diet of otters is fish, although location of habitat does play an important role in what is consumed. Crayfish, snails, mussels, reptiles, amphibians, and insects can be part of their diet. Mammals, waterfowl, and vegetable matter is also taken but to a lesser degree. Along the coast, an otter's diet will include crabs, shrimp, and other marine life.

Since fish make up a high percentage of an otter's diet, their presence in or around any commercial fish operation should cause concern. A little detective work, such as examination of an otter "toilet" will reveal clues about what has recently been consumed. If problems occur, there are non-lethal methods available to control river otters.

For more information on the river otter contact Richard Tharp, Wildlife Biologist, Alabama Division of Wildlife and Freshwater Fisheries, 2227 East Laurel Street, Atmore, AL 36502; telephone (251)368-2830.

Jim Leupold/U.S. Fish & Wildlife Service

Evan Frank Allison
Pioneer in Conservation
1865-1937

By ***Tilda Mims***
Information Specialist, Alabama Forestry Commission

"In the management of his lands he led the way in Alabama to profitable forest conservation through selective tree cutting and reforestation. He restored species of wildlife indigenous to the area and taught methods for their conservation."

Alabama Hall of Fame, 1961

Allison erected the first fire tower in Alabama and it served as the company logo for many years. The tower remained standing until the mill and lands were purchased by the American Can Company which later razed it.

Those two powerful sentences summarize the life of Evan Frank Allison - a man devoted to a practice of conservation that provided multiple benefits. As a matter of personal interest he loved nature; as a sound business practice he cultivated the forest assuring a harvest for his own and future generations.

Allison was a pioneer in his efforts to preserve forest and wildlife resources in his native West Alabama and he preached, with vigor, a practical course of conservation that influenced many landowners and future generations of landowners.

Although born to a family of limited resources, he established Allison Lumber Company in Sumter County and guided it to a position of leadership in the pine and hardwood industries. He gained control of wide timber interests and took an active part in the economic development of the state.

While others were stripping the land of timber growth, he selectively cut crooked, forked, and mature trees, leaving superior trees for reproduction. He also planted large numbers of seedlings each year. He met the ever-present threat of wildfire through developing a cooperative understanding with neighbors, con-

At one time, Allison (at left with cigar) and his forester counted less than five deer on 10,000 acres. Following years of careful forest management and partnering with local hunting clubs, his more than 100,000 acres became a vast preserve for deer, wild turkey, and other game. He is pictured here at one of the large annual hunts he hosted for influential guests which highlighted the fruits of his woodland and wildlife conservation program.

taining fires through an early warning system, and by erecting Alabama's first fire observation tower.

At the time of his death in 1937, he was the majority owner of a business that owned a town, the Sumter & Choctaw Railroad, a sawmill, and over 100,000 acres of prime timberland in Sumter and Choctaw Counties.

Allison Lumber Company

E.F. Allison and Steve Smith started in the sawmill business in an area east of York, Alabama in central Sumter County. They sold this operation to the Sumter Lumber Company in 1889. Then in 1899 Allison and Smith, along with a third partner, R.C. Derby (also of Sumter County), established the Allison Lumber Company at Bellamy, Alabama.

Bellamy was founded as a sawmill town. It was home to Sumter County's first hospital. It also contained a pressing shop, shoe shop, carpentry business, a slaughter house, library, telephone office, post office, commissary, filling station, train depot, a hotel, three churches, an opera house, two recreation halls, two swimming pools, and a gambling house.

As local history goes, the residents of the town decided to break with the tradition of naming the town after a prominent citizen. Instead, they sought out the least respected person in town. It was so named for Volney Bellamy, a Union Army veteran.

In 1902, the company was incorporated, and J.G. Mitchell and Charles Rowland of Toledo, Ohio bought out the interest of Smith and Derby. The mill capacity was increased and operations continued without interruption until 1922 when a new plant was built.

The new plant was described as "magnificent," with an eight-foot band head saw, a six-foot vertical resaw, and a gang saw. The plant had a daily capacity of 75,000 feet of lumber on a ten and one-half hour run.

(Continued on page 30)

Evan Frank Allison

(continued from page 29)

An early 1930s publication about the Allison Lumber Company stated, "This capacity was determined by two main considerations: First, through careful cutting, fire prevention and reforestation, a perpetual operation could be maintained at this rate of depletion. Second, the State of Alabama, through conservative forestry laws, has so distributed the tax burden as to make it economically possible to reforest and guarantee to posterity a supply of forest products."

The company also employed a crew of strictly all-hardwood men that worked the mill's night run, devoted to cutting hardwood.

Wildlife Conservation

As Allison conserved the woodland, he conserved its animals as well. After he and his forester counted less than five deer on 10,000 acres, he immediately suspended hunting of whitetail deer for several years to restore stocks. He later instituted a practice of allowing large tracts to be used by local hunting clubs, with the stipulation that they complied with his rules and partnered with him in protection from forest fires.

Eventually, his more than 100,000 acres became a vast preserve of untold numbers of deer, wild turkey, and other game. He hosted large annual hunts for influential guests to highlight the results of his woodland and wildlife conservation program. The State of Alabama adopted some of his policies regarding hunting and preservation of wild game as laws and regulations.

As a conservationist and lumberman, Evan Frank Allison provided business, social, and political leadership for his contemporaries and an inspiration for all stewards of the forest. He was inducted into the Alabama Hall of Fame in 1961.

Editor's Note: We appreciate the accompanying historical photos generously furnished by the family of the late Billy Rumley, former AFC Sumter County Manager.

A special dinner at Allison Lumber Company. Date unknown.

THE FEDERATION OF SOUTHERN COOPERATIVES/LAF in conjunction with THE ALABAMA FORESTRY COMMISSION is hosting the following events:

- **Forestry Tour** — **August 15, 2003**
- **Wildlife Management Workshop** — **September 6, 2003**
- **Management Plan Seminar** — **September 10-20, 2003**

These events will be held at
The Federation of Southern Cooperatives/LAF Rural Training & Research Center
Highway 21 North (5 miles from the Epes Post Office)
Epes, Alabama

Please note: Dates are subject to change. If you are interested in a specific event, please call us. Individual brochures are available for each event.

For more information, contact: Amadou Diop or Jaleel Nash
telephone: (205) 652-9676
e-mail: ameuu@yahoo.com or jkn1611@yahoo.com

For current information on the Southern Pine Beetle situation in Alabama, visit the Alabama Forestry Commission web page at: www.forestry.state.al.us

CHANGE OF ADDRESS FORM

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

Saw Palmetto

(Serenoa repens)

By ***Fred Nation***
Educator/Naturalist, Baldwin County

OF ALABAMA Plants

Saw palmetto is a distinctive understory shrub in the pinelands and other forested habitats of coastal Alabama. Our largest populations are seen in the dry, sandy soils of Baldwin and Mobile Counties, where dense colonial thickets sometimes cover several acres. Elsewhere in the state, *Serenoa repens* is mostly restricted to the southern tier of counties, along the border with the Florida panhandle.

The leaves are large, to three feet across, palmately compound, nearly circular in overall outline, with about 30 linear segments that radiate outward from the center. Leaf stems are two to three feet long, with two marginal rows of sharp, stiff, curved serrations. These saw-teeth are distinctive, and can be used to distinguish saw palmetto from our two other native palms: bluestem palmetto, *Sabal minor,* and the rare needle palm, *Rhapidophyllum hystrix.*

The shaggy trunk of saw palmetto usually runs along the ground, just beneath the surface, sometimes partially exposed. In old individuals it can easily grow to several yards in length. Historically the trunks were collected as a source of tannin, for use as a dye mordant, and to tan leather.

The flowers are small, fragrant, creamy white, in large inflorescences in late spring. They are eagerly sought by honeybees for their nectar which produces excellent, mild-flavored honey. The fruits are nearly black in color, oval, to about one inch long, with a single large pit. They provide food for many wildlife species, including black bears. They are ill-scented and appear to be unpalatable, but historical reports indicate that palmetto fruits were occasionally gathered for human consumption by Native Americans and early European settlers along the gulf coast. Fruit extracts are currently refined for medical use, as an effective modern treatment for prostate inflammation and enlargement.

Saw palmetto is an important fire-adapted member of our fire-dependent, forested coastal plain ecosystems. The tough, stringy roots hold soils to help prevent erosion, and the large leaves and dense growth habit quickly regenerate after fires to provide excellent wildlife cover. Loggers and turpentiners have always given palmetto thickets a wide berth for their well-justified reputation as shady havens for eastern diamondback and timber rattlesnakes.

In recent years landscapers and plant growers have recognized saw palmetto as a dramatic, drought-resistant specimen plant, particularly suited to dry, sunny, sandy landscapes throughout the state. *Serenoa repens* is now widely available as container-grown stock at nurseries and garden centers.

TREASURE FOREST

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

CHANGE SERVICE REQUESTED

PRESORTED
STANDARD
U.S. POSTAGE
PAID
MONTGOMERY AL
PERMIT NO 109