





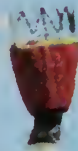
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Georgia

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Forester Stephen Smith and friends plant an Arbor Day tree.

ARBOR DAY CELEBRATIONS BECOMING MORE POPULAR THROUGHOUT STATE

Governor Joe Frank Harris signed a proclamation during a brief ceremony in his capitol office in Atlanta and Forester Stephen C. Smith of the Georgia Forestry Commission showed school children in Columbus how to properly plant a dogwood tree.

Those two activities and hundreds of others across the state marked the observance of the 1988 Arbor Day in Georgia.

Arbor Day - the statewide annual celebration emphasizing the value of trees - mushroomed this year into what Commission officials believe to be the most extensive celebration of the event since it was inaugurated by the General Assembly in 1941. The day is celebrated on the third Friday in February.

From the North Georgia mountains to the Atlantic coast, small towns and cities

throughout the state planted trees to honor the special day. Schools ranging from small elementary units to large colleges planted trees, while mayors and other city officials presided over numerous tree planting ceremonies in parks and on other public property. In many public tree planting ceremonies, trees were dedicated to individuals who had made worthy contributions to their community. Reports indicate an unusually large number of private landowners also celebrated Arbor Day this year by planting trees on their lawns.

In Macon, the headquarters of the Commission, the city reacted to Arbor Day with typical enthusiasm reflected across the state. The Macon Beautification Tree Committee sponsored a tree planting ceremony in Mulberry Street Park. Two trees were

(continued on page 6)

ON THE COVER *Forest fires in Georgia are usually contained by breaks plowed by crawler tractors, but when fire rages in rugged terrain, the Commission's helicopters are brought in to squelch the blaze. This was a demonstration to show the effectiveness of a water drop to a group of forest landowners. (Photo by Bill Edwards).*

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Do those portable fire shelters really work? Ask Forest Patrolmen Bobby Smith, Bartow County, and Jimmy Cranford, Pulaski County. They found out the hard way and their answer to the question is a definite YES!

The two were attempting to plow a couple of firebreaks on a steep slope on Pine Mountain near Cartersville to contain a fire that had been set when a pole snapped on a 15,000-volt powerline. It was a windy autumn day, but the wind was not the main problem. The rough, steep terrain made plowing difficult and as the heavy tractors lumbered closer to the mountain top it became even worse.

BLOCKED BY STONES

Smith and Cranford were confronted by huge boulders - some larger than their tractors - and jagged rocks that could have easily overturned the crawlers if hit from a certain angle. Fortunately, Pilot Curtis Lewis, who was circling above the scene, recognized the difficult time they were having with the terrain and instructed the operators to drop back to the rear of the firebreaks and clear out a safety zone.

After completing a safety zone, the two tractors continued to the top of the mountain. They were completely cut off from view of the fire. The pilot, however, was keeping a close eye on the fire's behavior and when he saw it suddenly start to make very strong and rapid run to the mountain top, he immediately alerted the patrolmen. They were told to return to the safety area and get into their shelters.

The pilot reported flames shooting 100 feet above the treetops. He instructed a Commission helicopter which was also working the fire to make a water drop on the men and the swiftly approaching fire. The copter, piloted by Brad Turner, re-landed immediately.

Patrolman Smith estimated that they had only two or three minutes to make it to the clearing and get inside the small tents. He said it was warm inside the shelter, but not too uncomfortable because the water drop had come in time to check some of the fire's fury.

ANXIOUS MINUTES

Meanwhile, Forester Specialist David Nicholson of the Commission's Forest Protection Department, who operated the bucket from the helicopter, said "we spent from five to ten very anxious minutes in trying to find the men from the air...we were hindered by some very dense smoke." Nicholson said he did, however, "hit the target" when the men were spotted.

Smith said the close call made him grateful for the special training and safety equipment that have been given to Commission firefighting personnel in recent months. Patrolman Cranford, who is experienced in fighting fire in the flatlands of Middle Georgia, said he is thankful to Smith for



Gainesville District Ranger Jimmy Smith shows the type of life-saving portable shelter used recently when two patrolmen were trapped in a dangerous mountain fire in North Georgia. When in use, a person lies flat on the ground and the cover is similar to a small one-man tent. When not in use, it folds to the size of a large envelope.

YES, PORTABLE FIRE SHELTERS WORK!

Patrolmen Smith and Cranford Learned The Hard Way

showing him how to maneuver a tractor up the side of a rocky mountain.

Ranger Gene Walraven of the Bartow County Unit was fire boss on the stubborn fire that burned or smoldered for four days before it finally subdued. He said it required a considerable number of men

and pieces of equipment from the Commission, as well as men and equipment from the U. S. Army Reserve, to battle the big fire. He said the most anxious moments came, of course, when Smith and Cranford were forced to try out the efficiency of their life-saving shelters.

EVANS HEADS NATIONAL FORESTRY COMMITTEE

Walter Evans, Screven County timber grower, has been named chairman of the American Farm Bureau Forestry Advisory committee.

The committee, composed of 19 timber growers from throughout the United States, will advise the nation's largest farm organization on timber policies.

Evans, who began managing his family's timberland 30 years ago, raises 350 acres of timber today on his farm near Sylvania. He also owns and operates Evans Lumber Co., Inc., a sawmill that cuts more than five million board feet a year. His farm also includes 150 acres of pastureland and row crops.

Recognized statewide for his expertise in the field of timber, Evans serves as chairman of the Georgia Farm Bureau Forestry Advisory Committee, and was recently appointed by Governor Joe Frank Harris to a six-year term on the Georgia Forestry Research board. The Research Department, a division of the Georgia Forestry Commission handles the budgets for all forestry research projects funded by the state.

Evans was among a select group of Georgians invited to testify at a recent hearing held in Macon by U.S. Senator Wyche Fowler (D-GA) on the two-year old federal Conservation Reserve Program, which has resulted in the planting of 330,000 acres in trees in Georgia.

The national chairman also serves on the oversight committee of the Ernst Brender Experimental Forest.



Landowners generally look to a contract only as the means to secure payment for a timber sale. But a timber-sale contract can be more than that with a little planning, it can be an excellent investment device that helps the landowner accomplish objectives for the land, even after the trees are gone. This is usually done through restrictive and reforestation clauses, which will be discussed later in this article.

First, you should know that a good timber contract need not be complicated or full of "legalese." In most cases, simple, straight forward language is best. Don't try to save money by using a standard contract. In timber harvesting there is no "standard" contract, because each forest has its own unique characteristics that will need to be addressed according to the landowner's objectives.

Because a timber sale involves the landowner, forester, and independent contract logger and/or buyer, the contract should strive for a harmonious relationship among the three by spelling out each party's objectives and restrictions. (If the buyer is not the logger but contracts someone else to harvest your timber, they will usually have their own separate agreement, but its specifications will depend on the timber contract.)

THE FIRST STEP

As a first step in creating a timber contract, you should consult an attorney or have your forester do so. Foresters often know of lawyers who deal with timber contracts regularly and who will understand and pay attention to your silvicultural goals. Basic questions such as how much control you want, and what clauses are needed to meet objectives should be answered before writing the contract.

Although the contract should be worded to accomplish what the landowner wants, it is wise not to be too tight on the logger or timber purchaser. In many cases, a landowner will want a purchaser's business again. But even if this is the timber sale of your lifetime, if you load the contract with picky restrictions, either you will not get a buyer or you'll break the logger you do get. The logger is an integral part of the timber-sale process, but he has to satisfy the landowner and the purchaser (if he himself is not the buyer).

Some landowners are wary of loggers and feel that if you give a logger a steel ball he will bend it. Other landowners do not like the heavy equipment most of today's loggers use. The forester should be able to sense these fears and can do a couple of things to allay them. First, he or she can arrange for the landowner to visit with the logger or purchaser on sites presently being logged or where a job was recently completed. Also, the forester should explain to the landowner that although some loggers specialize in small, low-



IN TIMBER SALES

THERE IS NO 'STANDARD CONTRACT'

By Bob Izlar

EDITOR'S NOTE: Georgia Forestry has published articles periodically urging landowners to negotiate a sound contract to avoid costly pitfalls before selling their timber, but this version by Bob Izlar, Executive Director of the Georgia Forestry Association, details the advantages in a wider perspective. Thanks to American Forests magazine for permission to reprint this copyrighted article.

impact operations, their services may cost more than the environmental advantages are worth on some tracts.

From a regeneration standpoint, the main thrust of a timber-sale contract should be to minimize damage and allow the purchaser to harvest quickly, efficiently, and profitably. The landowner should expect some damage to occur, but the contract can make provisions to keep damage to a minimum. Timber harvests naturally look rough to a landowner who has never sold timber. A forester can tell the difference between a rough-looking harvest and one that causes unnecessary damage, and the contract should set guidelines for on-site inspections by the forester.

**RESTRICTIVE
CLAUSES HELP
PROTECT THE SITE
DURING AND AFTER
THE HARVEST**

As mentioned before, a timber contract can act to protect and enhance your forestland investment in two ways—via restrictive clauses and reforestation clauses. Restrictive clauses help protect the site during

and after the harvest. There are several types, and it is up to you, your forester, and perhaps the logger to decide which should be included in your contract.

Every contract should have a wet-weather clause, however. In extremely wet weather, a forester or landowner can use such a clause to suspend logging until ground conditions are more favorable. A corollary to this type of restrictive clause is the extension clause, which gives a logger more time to complete the job in case wet weather limits access to the site.

A landowner may choose to have a penalty clause to discourage the cutting of trees that are not part of the sale, or to pay for damage to fences, roads, ditches, gates, streams, etc. A cleanup clause assures that the logger or buyer will pick up trash left on the site and restore roads and ditches to their preharvest condition. Other stipulations that might be included either under a clause already mentioned or listed on their own, are size and grade of trees to be cut; acceptable stump height; top diameter limits of trees cut; and provisions for unmerchantable tops, limbs, and slash. A fire protection clause provides for precaution, control, and suppression of fire and allows for suspension of logging activities during hazardous periods.

Logging layout is also often specified in a timber contract. Some considerations having to do with layout that might be included are measures to protect erodible slopes, streams, and trees along roads and skid trails; arrangements for landing and haul road location, construction, and main-

enance; limitations on equipment size and type; and maximum skidding log length.

While restrictive clauses generally protect the forest site during and immediately after the logging, reforestation clauses help the landowner see to the future of the land. There are two kinds of reforestation clauses - consulting agreements and service agreements.

REFORESTATION CLAUSES GENERALLY PROTECT THE FOREST SITE AFTER THE LOGGING

In a consulting agreement, the purchaser agrees to provide the landowner with technical reforestation advice, either free or for a price. These agreements are usually part of a larger management plan. On the other hand, service agreements establish a contractual relationship between purchaser and landowner in which the purchaser agrees to perform certain reforestation activities at an established price. These activities may include planting, land clearing, prescribed burning, fertilization, bedding, chopping, or other site preparation activities.

In one form of a consulting agreement, the purchaser develops a forest management plan for the landowner. The plan contains silvicultural recommendations and, if the landowner requests it, technical assistance on recommended treatments. This service is usually free or at minimal cost.

However, the purchaser does not assume any responsibilities for or contribute to the actual cost of performing the services recommended. Although the purchaser will often introduce the landowner to independent contractors who perform the needed services, the landowner negotiates with the contractors on his own and pays them. If contractors are not available, the buyer may perform the suggested services at a rate previously agreed upon, but the agreement then becomes a service agreement.

As part of a consulting agreement, the timber purchaser may also offer to assist the landowner in applying for federal or state forestry incentive and cost-sharing monies. In some cases, the buyer may agree to pay 50 percent of approved tree seedling orders.

In a service agreement that provides reforestation services under a purchaser's management plan, the buyer agrees to perform site preparation and planting at cost. And that is where the buyer's responsibility stops; the landowner accepts responsibility for tree survival.

CHERRY BLOSSOM FESTIVAL INCLUDES COMMISSION TOUR

A series of forestry events, titled Smokey's Firefighting Demonstrations, will be offered by the Commission on March 18 and 25 as one of the highlights of Macon's nationally publicized annual Cherry Blossom Festival.

Scheduled at 3:30 p.m. on both Fridays during the festival, the demonstrations will include a variety of events including a helicopter water drop and a tour of the Commission's wood heating system. Tour buses will pick up visitors at 3:00 p.m. from Central City Park on both days and return them to the park immediately after the demonstration.

Sharon Dolliver, forester specialist stationed at Commission state headquarters in Macon, said the program is designed for adults and children. "Very few people know what goes on behind the scenes in cultivating and protecting Georgia's \$8.6 billion forestry industry," Dolliver said. "This series of demonstrations offers an unusual opportunity for people to see things they might never otherwise get a chance to see."

A case in point, Dolliver points out, is a massive helicopter water drop used in large scale firefighting operations. "Most people would never get close enough to such a fire to see a helicopter water drop," she said.

Visitors will have another unusual opportunity when the tour takes them to a demonstration of the Commission's wood heating system. In operation since 1981, the system uses 344 tons of wood chips per year and saves more than \$18,000 annually in energy costs.

"The wood energy demonstration is highly relevant to our current energy problems," Dolliver said, "because this use of a renewable resource for heating may well be the wave of the future."

Visitors will later view truck and tractor firefighting units and see a shingle machine turning out beautifully crafted shingles - to show only one of the numerous uses of Georgia's pine timber. Visitors will be given shingle samples for souvenirs.

And, of course, we'll have Smokey Bear," Dolliver pointed out. "Smokey is always a big hit with children and adults. This time he'll be passing out his special gifts and packets of pine seedlings."

Persons interested in taking the Commission's special demonstration tour may sign up at the Commission's exhibit in the round building at Central City Park or call 744-3377, Dolliver said.



Dr. Gloria M. Shatto

GOVERNOR NAMES BERRY PRESIDENT BOARD MEMBER

Dr. Gloria M. Shatto, president of Berry College, has been appointed by Governor Joe Frank Harris to serve on the Georgia Forestry Board of Commissioners.

Dr. Shatto, a native of Houston, Texas, replaced Patricia Robinson of Atlanta, who recently resigned to accept a position in Wisconsin.

Dr. Shatto, who was named president of the college in Mount Berry near Rome in 1980, previously served on the faculty of Trinity College in San Antonio, the University of Houston and Georgia Tech. She is on the board of trustees of Georgia Tech, Berry College and the First United Methodist Church. She is on the board of directors of Georgia Power Company, K Mart Corporation, The Southern Company, Redmond Park Hospital and other institutions and organizations. She is the author of several articles pertaining to economics and related topics.

The educator has two college-age sons and her husband is an engineer with Georgia Power Company in Rome.

John Mixon, Commission director, said "we are highly pleased that the governor has appointed Dr. Shatto to our board. We know she will be a tremendous asset to the Commission."



Judges for the 1988 Smokey Bear and Woodsy Owl Poster Contest look over hundreds of entries. Judges in front, left to right, are Mrs. James Phillips, Mrs. Bernard Bridges and Mrs. Lynn Jones, all of Moultrie. The three represent the Garden Club of Georgia, co-sponsor of the annual contest. In back are Colquitt County Ranger Donald Bennett and Mrs. Retha Beverly. Mrs. Jones, the club's state poster chairman, said more than 1,000 posters were entered in the contest this year to set a new record. Winners will be announced at the club's annual convention this summer in Atlanta.

ARBOR DAY

(continued from page 2)

planted in dedication to Macon residents for community service.

Other Macon activities included a tree planting ceremony on the grounds of Henry A. Hunt Elementary School. This ceremony, attended by Mayor Lee Robinson, was the kickoff of a grounds beautification program being initiated by the school. Commission Deputy Director David Westmoreland attended the Macon tree planting ceremonies.

Atlanta had unusually widespread Arbor Day activity this year. Fifth graders in virtually all Atlanta elementary schools participated by planting 15,000 seed packets distributed by the Commission and the Outdoor Activity Center. Also, Mayor Andrew Young and Commissioner Michael Lomax participated in planting ceremonies with children from five local schools. Trees were planted to serve as living monuments of the city's 150th anniversary - and 200th anniversary of the national constitution.

Atlanta's progressive tradition of balancing an urban environment with nature was emphasized on Arbor Day by the dedication of a special grove of trees in honor of the U. S. Constitution. The grove was planted at Cascade Springs Nature Preserve. And to receive the final and appropriate finishing touch for a massive Arbor Day celebration, Atlanta received recertification as a Tree City USA, as did several other Georgia cities.

The city of Gainesville became Tree City USA for the first time this year. Commis-

sion Director John Mixon attended the Gainesville Arbor Day Ceremony and presented the award to city officials. Jean Sawyer, chairman of the city's Clean and Beautiful Committee, was highly instrumental in developing the city's status to Tree City USA caliber.

Gainesville city officials say this year's Arbor Day tree planting ceremonies mark a new beginning in the city's efforts toward beautification.

Columbus was the first city in the state to be designated a Tree City USA and on Arbor Day this year, Mayor James Jernigan and other community leaders participated in a downtown ceremony marking the tenth anniversary of that certification.

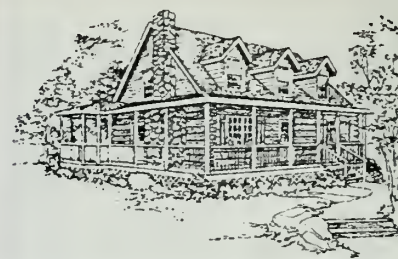
A ceremony was also held in February in which Governor Harris presented a certificate of appreciation to the mayors of Georgia cities that currently have the Tree City status. The cities include Trenton, Marietta, Atlanta, Avondale Estates, Washington, Augusta, Macon, Gainesville, Columbus, Savannah and Valdosta.

DATES SET FOR TIMBER HARVEST EXPO

Loggers have Georgia on their minds when spring blooms across the South. The state is the site of the Timber Harvesting Expo -- Southeast.

The Expo, held every two years, has become the premiere event for people involved in Southern logging to learn ways to do their jobs better and more profitably and to see what's new in timber harvesting technology.

The eighth Timber Harvesting Expo -- Southeast will be held April 22-23 in



NEW BROCHURE ON LOG HOMES NOW AVAILABLE

The Commission now has a new brochure available titled "Log Home Construction and Maintenance Tips: How to prevent Decay and Insects." The publication is a guide for log house owners and individuals desiring to build a log house. The brochure details proper drying techniques for logs, as well as correct storage, shipping, and handling methods.

The brochure is co-authored by Terry Price, Commission Entomologist. Others include Lonnie Williams, USFS, and Terry Amburcey, Mississippi State University.

Other topics include incorrect house design and prevention of insect infestation. Since insects can present a serious problem in log structures, special attention is given to certain types of insects, including flat-headed borers, old house borers, carpenter bees, powderpost beetles and termites.

The insects are divided into two categories: those attacking freshly cut logs with bark, and those attacking seasoned wood. The publication emphasizes that both categories of insects can be a serious problem. Prevention of insect attacks is always preferable to controlling the pests, according to the brochure.

Copies of the brochure may be obtained from Commission offices.

Tifton, with headquarters at the Rural Development Center on Interstate 75.

At the last Expo in 1986, more than 1,500 loggers, timber dealers, sawmillers and forest products company representatives attended.

Joe McNeel, Expo coordinator and a timber harvesting specialist for the University of Georgia Extension Service, says the two-day show is a compact package of educational sessions, static equipment displays and in-woods demonstrations



Patrolmen Carolyn Reagan and Phillip Talley take a coffee break in the kitchen lined with attractive pine cabinets built by unit personnel.

DAWSON PERSONNEL BUILD ALL-PINE OFFICE

The Commission's Dawson County Unit is one of a kind, according to Ranger Jerry Barron. "If it's not one of a kind," said Barron, qualifying his statement, "I don't know of another one like it."

The Dawsonville ranger, in charge of the unit's operation, is referring to a recently completed all-pine office building. The interior is white pine with Southern yellow pine flooring, while the exterior is pine plywood. All lumber was kiln dried in Cleveland. The yellow pine flooring was grooved in Gainesville.

Ranger Barron pointed out that as much of the project as possible - other than actual construction - was done in nearby areas for efficiency and economy. Unit personnel did all carpentry work as well as plumbing, electrical and heating installations.

The Commission's portable (mobile dimension) sawmill was transported to Dawson County where lumber for the project was cut to specifications. White pine walls were cut to eight foot lengths in widths of four, six and eight inches. Pine roofing shingles were made at the Commission's headquarters in Macon on the Commission's shingle machine.

The most dramatic feature of this self-sustaining unit's construction work is the interior white pine; everything inside the unit, from the intricate cabinet design to the toilet paper dispenser, is white pine. The beautifully grained white walls are stretched from ceiling to floor with nature's

arrangements of dark images that rival the psychological Rorschach ink blot test for possible interpretations.

"We have a lot of comments from visitors on how unusual these walls are," Barron said.

Images in the white pine are formed by knots, and most of the images require little imagination to see numerous identifications unit personnel have made during the short time since the building's completion. Easily recognizable outlines include a raccoon, bulldog, butterfly, and the eerie face of E. T. staring straight out of the woodwork. Even the face of one unit staff member has been identified - by other members of the staff, not the individual identified.

The Dawsonville staff say more and more images are being identified as time passes.

"We're proud of our unit because of the craftsmanship and unique quality of the white pine," Barron said. "All of our personnel worked long and hard on this project." He added that scheduling the work was often the most difficult aspect of the project, since construction had to be coordinated with fire fighting, equipment maintenance and other duties.

Unit personnel responsible for the project include: Jerry Barron, ranger; Leonard Slaton, tower operator; Winston West, forester; Carolyn Reagan, patrolman; Phillip Talley, patrolman; and Willy Patterson, patrolman.





Landowner Robert Ware, Senator Talmadge, Commission Director John Mixon.

A VETERAN S THE GEORGI PROMINENCI OF FORESTR

TALMADGE: Some

Herman E. Talmadge, former governor of Georgia, former United States Senator and present day practicing attorney and tree farmer, had just completed a telephone interview from a news source in New England concerning his recently published memoirs.

The author, who served as governor of his state for six years and spent 24 years in the Senate, has enough political experience to easily fill a book and his memoirs tell it all! There have been ups and downs and pros and cons, but regardless of all situations concerned, one factor remained constant - Herman Talmadge has been a visionary for forestry since boyhood and became a major force in developing Georgia's forestry potential into the state's number one money industry that now serves in many aspects as a role model for the nation.

On this day, however, his literary accomplishment was not paramount on his mind. *Georgia Forestry* had asked his candid views on forestry and he said he was eager to comply.

Lounging comfortably in the spacious den of his home on Lake Talmadge, the nationally known figure seemed to study the large portrait of his legendary father, Eugene Talmadge, over a fireplace mantle as he spoke of his early childhood impressions of the pine forests that surrounded the family home in Telfair County.

DOWN HOME MEMORIES

"Some of my earliest recollections as a young boy were fighting forest fires," Talmadge said. He recalls his neighbors setting fire to the woods annually... "some to kill rattlesnakes and boll weevils, some to get early wiregrass grazing for cattle, and some just for the hell of it."

But Talmadge knew, even at 12 years of age, that his family fought forest fires to protect their timber, and he remembered that they were among the first in that area to fight wildfires with that objective. He also remembers when the smoke of uncontrolled wildfires blotted out the Georgia sun.

The primitive and often dangerous methods of fighting wildfires in those days left indelible impressions on the young Talmadge that led to his second stage of interest in forestry.

"When I was governor of Georgia," he said, "I decided at that time that timber was our greatest and most noble resource in the state. We weren't blessed with any great resources in minerals and had little or no gold. We did have a good deal of mica but it was just in the process of being developed. We didn't have any petroleum, but I knew that a tree could replenish itself pretty fast."

The new governor set out to lure wood-related industries into the state, but he confessed that it took a Connecticut industrialist to make him better realize the true worth of Georgia's abundant forests and how they could attract manufacturers and wood processing plants.

"One of the first plants that I sought and was successful in getting was Rayonier in Jesup," he said. "I made a trip up to the company president's home in Connecticut and he made me a speech about Georgia's resources. He said we had a tremendous potential in cellulose fiber and we could grow it better than any other area in the world.

"When I came back home I was really interested in making better use of our resources and I put in a crash program to improve the Forestry Commission," said

Talmadge.

"If my memory is correct, he said, "we then had only about 27 counties in the state under fire protection." That did not seem logical to Talmadge when considering Georgia's timber resources in use at

"WHEN I TOOK OFFICE, I THINK GEORGIA WAS RATED 47 OUT OF 48 STATES IN FORESTRY. IN TWO YEARS IT WAS RATED NUMBER ONE."

that time was valued at approximately \$300,000,000.

"So we expanded our fire protection statewide, increased the production of our nurseries, and encouraged farmers to plant timber," Talmadge said. "When I took office, I think Georgia was rated 47 out of the 48 states in forestry. In two years it was rated number one. Now we have more tree farms than any state in the Union except Florida, and we produce more cellulose fiber than any state except Oregon."

To illustrate the escalating timberland value that he has witnessed since Georgia began to better utilize her woodlands Talmadge told of a time when he and friend were offered 6,000 acres of Effingham County land "with pretty good timber

MAN, WHO EMERGED FROM LANDS TO NATIONAL URNS HOME TO A NEW AGE

By Howard Bennett & William S. Edwards

ews On Forestry

on it" for just a little more than \$20,000. He said he talked the proposition over with his father, who was governor at that time, and he advised against the deal as it might later be construed by some as a conflict of interest. The friend sold tractors and other equipment and if the state ever purchased from him, the elder Talmadge reasoned, some conflict of interest involving his son might be alleged. "I had to turn down the deal, but can you imagine what that property would be worth today," said Talmadge.

At a later time in his life, he said he was offered "6,000 acres down in Clinch County for \$4.00 an acre." He said he seriously considered buying the tract, but "I was preparing to go into the Navy and I wondered what my wife would do with 6,000 acres of timberland on the edge of Okefenokee Swamp if I got killed in the war, so I turned it down for that reason."

Talmadge said "I really got interested in forestry when I was governor." He said he started planting trees on his own farm in Henry County in 1951 and began tree stand improvement three years later. He said much of his farm was in low grade hardwood and he cut and shipped more than 100 carloads of hardwood pulpwood to Brunswick Pulp Company to get rid of it. "I think mine was the first hardwood pulpwood sold in this part of the state," he said.

In eliminating the hardwood to make way for pine, he said he also "got a jackleg sawmiller from over in Alabama and he stayed on my farm for over a year cutting everything he could make a crosstie or board out of...but I made one mistake, I cut all my white oak out that would be worth a lot of money today."

Talmadge said he had a difficult time

accepting prescribed burning as a forest management tool, but now regrets that he didn't "start using it when the Forestry Commission recommended it to me in 1960."

"I wasn't going to let anybody put fire in my woods," he said. Lack of knowledge concerning benefits of controlled burning, coupled with the memories of wildfires raging out of control across Georgia's timberlands left a psychological barrier to setting any kind of fire in the woods. When he was governor, even Talmadge was reluctant to use this highly beneficial technique.

"When I was running for governor," Talmadge remembered, "I'd drive around the state and find roads so clogged with smoke that I'd have to stop and wait until it cleared before I could go on. Remembering all that, I didn't want to start this burning business."

**"IT TOOK US 50 YEARS
TO TEACH PEOPLE
NOT TO BURN THE
WOODS AND IT'S
GOING TO TAKE 50
YEARS TO TEACH ...
PRESCRIBED
BURNING."**

Although the Commission recommended prescribed burning to Talmadge for this timberland in 1960, the senator said bad

memories prevented him from using it until 1981.

"But if I had started when it was recommended, I would have fifty percent more timber now," Talmadge said. "It took us 50 years to teach people not to burn the woods, and it's going to take another 50 years to teach them to use prescribed burning."

Talmadge said he now has all of his land planted in trees, but if he could start anew he would do two things differently:

"I would have my rows wide enough where I could keep the middles clean and I'd rake pinestraw every winter and sell it. There's a tremendous market for pinestraw, and it brings about as much or more than alfalfa hay."

He said the second change he would make in his planting program would be to plant some walnut trees. "You hear of walnut trees selling for over \$1,000 apiece. It's a long range proposition, but all timber is long range."

He had high praise for the present day Forestry Commission and recalled that it was nationally acclaimed almost 40 years ago. "I attended a National Governor's Conference in Seattle - I think it was in 1951 - and Douglas McKay, Secretary of the Interior at the time, made a speech to all the governors and the picked out Georgia's Forestry Commission for special commendation." He said the Commission was the "best in the Union" then and it has been improving ever since.

PROTECTION PRAISED

He said he is especially impressed with the progress that has been made in fire protection, as there was a time when one could drive south of Macon and "see a mile in any direction from the road" because fires had destroyed the forests. "But you drive down and look at it now and you can't see 50 feet off the road for the timber resources," he added.

When asked his opinion on the current Conservation Reserve Program, Talmadge was quick to sing the praises of the federally-funded measure that has already converted more than 330,000 acres of marginal lands in Georgia into tree planting sites. "I think for any farmer in Georgia who has a substantial amount of land, it's the most profitable crop he can raise with a guaranteed profit of about \$37.00 an acre, and I've heard it goes up to \$45.00 per acre. Now, when you can get that return with no labor, no fertilizer, no tilling for ten years, a man's a fool not to take advantage of it."

The former senator, who served as chairman of the Senate Agricultural Committee during many of his 24 years in Washington, said "I don't know of a crop that you can plant in this state year in and year out that you can get \$45.00 an acre that's certain...I've tried a little of everything, row cropping, etc." But he termed trees planted under the Soil Bank Program during

(continued on page 14)



National winner Walt Register poses with his proud parents, Mr. and Mrs. Reid Register, at their home in Homerville.

GEORGIA
WINS FOR
SECOND
CONSECUTIVE
YEAR!

Georgia did it again! For the second consecutive year, Georgia high school students captured first place honors in FFA forestry competition at the annual national convention of the Future Farmers of America.

Coming home from Kansas city with the national trophy were Chris Johnson, Blackshear; Walt Register, Homerville; and Steve Dennard, Perry.

The individual performance of the three team members was also impressive. Johnson walked away with the national first place, Register came in second and Dennard won fourth.

Johnson, the son of Mr. and Mrs. W. A. Johnson of Blackshear, is a graduate of Pierce County High School and is now studying forestry at Ware Tech in Waycross. "We knew we did good on the tests," said the student, "and when they announced the answers at the banquet we thought we might have won."

When news of the team's victory reached his home town, signs and posters went up and a special "Chris Johnson Day" was planned.

Register, son of Mr. and Mrs. Reid Register, is a senior at Clinch County High School. He said he will attend college and is "considering forestry" as a career. He said the team was well versed in general forestry and had considerable practice in the many competitive skills "that gives us confidence" in competing against 25 other teams from across the nation.

A special "Walt Register Assembly" was held at the local high school, with Board of Education and Chamber of Commerce officials joining students and teachers in the tribute.

Dennard, son of Mary and Donald Finley of Perry, is a recent graduate of Perry High School. He is presently working at a wholesale sporting goods company, but plans to enter Abraham Baldwin Agricultural College to study forestry. "I thought we had a pretty good chance of winning," Dennard said of the Kansas City contest, "we were well prepared."

The Houston County student said he was edged out of third place nationally in individual ratings by a participant from Connecticut by just eight points.

The three members of the Georgia team had high praise for Don Register and Malcolm Dillard, foresters with the Department of Education who work with FFA youth across the state, for helping them train for the national competition and then accompanying them to Kansas City.

The team that brought home the national trophy the previous year was composed of Tim Hughes of Statenville, Tony Waller of Patterson and Stephen Tinsley of Homerville.

FORESTRY TEAM TAKES TOP HONORS

Chris Johnson, left, and Steve Dennard knew the right answers in national competition in Kansas City.





Before the war ended, 218,000 soldiers had been trained at Wheeler. Hundreds of war heroes were produced by the camp, including Charles "Commando" Kelly and Sergeant Paul Huff, both of whom were awarded The Congressional Medal of Honor.

When World War II ended Camp Wheeler ended. The Army again returned the land to its owners and most of the buildings were sold or torn down.

In 1954, the State of Georgia acquired part of the site for a Forestry Center and Commission Headquarters. Today, it is also the home of other agencies and industries, including the Southeastern Forest Fire Laboratory, Georgia Department of Natural Resources regional office, National Tree Seed Laboratory occupy the camp site.

On the Georgia Forestry Center grounds, four of Camp Wheeler's World War II buildings are still in use, including the welding and mechanics shops. Other remains include foundations, paved streets, pipes and drains.

Paul Butts, Commission Utilization Forester, and Charles Place, Macon Metro Forester, were instrumental in getting the historical plaque approved.

The row upon row of Army barracks, the mess halls, the sprawling hospital complex, the mammoth warehouses, the drill fields and the motor pools are gone now, but the organization that maintains its headquarters on the location today is, in essence, also engaged in a kind of war - war against forest wildfire, forest insects and forest diseases.

Occasionally an "Old Soldier" from the Camp Wheeler days will pay a nostalgic visit to the Center for a glimpse of the area where he received his infantry training almost 50 years ago. He is usually referred to Staff Forester Paul Butts, a dedicated history buff, who has done extensive research on the camp. He has produced a display of old Wheeler photos, one of which is reproduced below.

Foresters Paul Butts, left, and Chuck Place were instrumental in having this marker erected.

ARMY POSTS WERE LOCATED ON SITE NOW OCCUPIED BY FORESTRY CENTER

A fact not widely publicized or known among Georgians is that the Georgia Forestry Commission's State Headquarters complex on the outskirts of Macon is located on the site of a large military camp that was used during both world wars.

The significance of this site was recognized recently with a dedication ceremony and historical marker describing Camp Wheeler. The 22,000-acre camp was first established in 1917 after Macon leaders sent local writer Harry Stillwell Edwards to Washington to ask his friend, Teddy Roosevelt, if he could help locate a camp in Bibb County. The camp was established shortly afterwards and named for Confederate General Joe Wheeler, who had distinguished himself in cavalry battles near Macon.

At the peak of activity during 1918, almost 28,000 soldiers were camped at Wheeler. The tent camp included infantry and artillery training, but its primary purpose was an infantry replacement training center. Wheeler was the headquarters for the Thirty

First, or Dixie Division during this period.

Casualties among Wheeler trainees during World War I were numerous, even before training was completed. An epidemic of measles and flu swept through the camp killing six to eight men a day. Casualties after training were even worse; some reports show that companies sent to France with two or three hundred troops returned with only a dozen or so of the original soldiers alive or not wounded.

After the first world war, the land was returned to the owners from whom it had been leased.

In 1940, when it appeared that the United States was again headed for war, 14,400 acres of the original camp sites were again leased and Camp Wheeler was re-established. The new camp was a large and prominent facility with more than 700 buildings to accommodate 26,000 troops. Included were a prisoner-of-war camp for 2,000 Italians and Germans, a 1,000-bed hospital and a Womens Army Corps detachment of 500 nearby.





This model fire suppression unit was carefully carved from pine wood 35 years ago and is now on permanent display at the Georgia Forestry Center. Nannette Godfrey examines a rear view mirror and other tiny details.

FORMER EMPLOYEE CREATED UNIQUE CARVING OF EARLY EQUIPMENT

Eugene Crummey no longer does wood carving, but he makes items such as the "country porch" shown here for his children and grandchildren. Now retired, he works in his shop at his home near Jesup.



One thing that usually catches the eye of the visitor to the state headquarters of the Georgia Forestry Commission in Macon is a miniature forest fire suppression unit carved from yellow pine.

Painstakingly whittled from four pieces of wood to form a truck, trailer, crawler tractor and plow, the carving is displayed in a glass case in the foyer of the Commission's administration building. A brass plate proclaims the intricate work was done by Eugene Crummey.

But who is Mr. Crummey? When and why did he whittle out this fascinating curio that so faithfully resembles a 1951 Ford truck, an International tractor and a Mathis plow? Why did he leave it to the Commission?

Some Commission "oldtimers" remember the wood carver, a former assistant warehouseman at the Commission's headquarters back in the fifties, but *Georgia Forestry* had to locate him to find the answers.

Crummey was found at his home on a country lane a couple of miles east of Jesup. "I lived in a converted army barracks on the ground when I worked for the Commission," he recalled, "and I had a lot of time on my hands at night and on weekends...and I just started whittling..." He said he mainly used "just a plain old pocket knife" to fashion the exact replica of mobile firefighting equipment used by the Commission 35 years ago. "It took me about three months, working on and off, to complete it," he said.

For a while the carving rested on a shelf in the office of the late Cecil Osborne in the Administration Department, but when the U.S. Forest Service and other organizations asked to borrow it for display at fairs, conventions and other events, it was taken down and encased in glass for protection.

Crummey left the Commission to go into dry cleaning business in Florida and the art he had created in wood was left with Don Lassiter, a welder in the Macon shop. Lassiter later presented the carving to the Commission.

The retired Crummey said he no longer whittles, but does some woodworking in a small shop in his home. He makes things with power tools for his children and grandchildren. They're attractive and well-crafted, but they don't compare with the beauty of the hand-carved suppression unit he left with the Commission for permanent display.



RANGER AND SERVICE GROUPS SET HIGH SCHOLARSHIP FUND

Forest Ranger Larry Brantley, with the help of two community organizations, will stage a county forestry pageant this year, but so will rangers in about 35 other counties.

But what makes Brantley's pageant unique is the value of the scholarship offered the winning contestant and the request that all girls competing for the Miss Toombs County Forestry write a brief essay on forestry.

The Toombs ranger said other organizations in the area that sponsor pageants "have been giving their winning girl substantially more than the \$250 scholarship our winner gets and I felt that we could do better."

He did do much better!

Thanks to the forest-related industries in Toombs County and the aid of the local Jaycees and the Lyons Chapter of Beta Sigma Phi who helped solicit the contributors, the young lady selected to represent Toombs at the Miss Georgia Forestry finals this year will receive a \$1,000 college scholarship and an all expense paid trip to Jekyll Island.

Although the scholarship is the highest awarded in any forestry pageant on the county level, Brantley gives credit to Ranger Billy Roland of the Decatur County Unit "for showing me how people in his county worked together to get contributions or the girls." The pageant in Roland's county last year awarded a \$500 scholarship to the winner, with another \$500 divided between the first and second runnersup.

Ranger Brantley is also requiring contestants to submit an essay on how forest industries influence their lives. "We have had girls in the past who just didn't know the first thing about forestry and I feel this will at least cause them to become acquainted with the importance of forestry here in their own home county."

The ranger said the sponsoring Jaycees and the sorority agreed that the traditional Miss Congeniality award be eliminated in favor of a trophy to be awarded for the best essay at the pageant.



Lt. Joe Kucera, Detachment 1 Commander, 82nd Maintenance Company, Georgia National Guard, stands with Ranger O'Neal Kellar of the Commission's Franklin-Hart-Stephens County Unit in a Lavonia park as they prepare to plant a white oak tree. The planting ceremony was one of many observed around the state by the National Guard in commemoration of the 200th anniversary of the U. S. Constitution. The trees were provided by the Commission.



Bill Oliver of Lyons, a member of the Jaycees which co-sponsors the Miss Toombs County Forestry Pageant, looks over plans with Ranger Larry Brantley for the annual contest to be staged in March to select a girl to represent the county in the state finals June 12 on Jekyll Island.

FFA FORESTRY FIELD DAYS SCHEDULE IS ANNOUNCED

Dates and locations for statewide FFA (Future Farmers of America) competitive forestry meets have been set, according to Don Register and B. M. Dillard, consultant foresters with the Vocational Agricultural Department.

Forester Register coordinates the forestry field days for the Southern section of the state, while Dillard is responsible for competition in the Northern section. A total of nine regional meets will be held for FFA chapter high school students throughout the state to compete in forestry related events including: forest management, land measurement, standing pulpwood estimation, tree identification, selective marking, ocular estimation, and identification of insects and diseases.

Two months of regional competition will culminate with state finals to be held at Commission headquarters in Macon. Foresters Register and Dillard describe the state finals as an intensive competition that brings together the elite FFA forestry competitors of Georgia.

Schedule for the 1988 meet is as follows:

March 23, Vidalia; March 31, Louisville; April 12, Adel; April 14, Broadhurst; April 19, Blakely; April 21, Cordele; April 14, Fairburn; April 19, Athens; April 21, Chatsworth; and the state finals May 4 in Macon.

Publicity for the field days and the final competition is provided by the Commission's Education and Fire Prevention Department and many of the Commission's foresters serve as judges in the contests.

TALMADGE

(continued from page 9)

“IF LAND WASN'T IN WATER, IT WAS IN TREES. I WANTED SOMETHING I DIDN'T HAVE TO FEED, FERTILIZE, PLOW OR HIRE LABOR TO LOOK AFTER.”

the Eisenhower Administration “the best farming deal I ever made.” He said the payment under that program was \$8.00 an acre “and that was a good deal at that time.” He said he has no acreage under CRP.

“All my adult life I’ve been thinking as the number of farms declined and the number of farmers declined and living conditions improved worldwide that we were going to have a better future for the farmer.” He now sees tree farming as the way to that brighter future for the Georgia farmer.

“One reason I’m so strong on timber is that it’s not a perishable product,” he said. “A farmer can state his own price for his product and sell it at any time he wants to, but if you’ve got a perishable product, you’ve got to sell it when the time is right and usually the market is depressed at that time.

ELIMINATE PRESSURE

“Whenever you are producing a product that you’ve got to take to town and say ‘What’ll you give me?’ on auction market, you are usually going to get a poor price for it, but you can pick out the year you want to sell your timber when the prices are good. When I started thinning mine and selling after I got out of the Senate in 1981, I fortunately hit a good market and some timber went for around \$180 a thousand, which is very good for North Georgia, but it’s not good for South Georgia.”

He says he feels that more and more people are finding it saddening to drive through the state and see vast areas of land that could be producing timber “when its not producing anything but persimmon trees, trash wood and broom sedge.”

He said, however, that “when you go to South Georgia today you don’t see too much of that...I was hunting in Taylor County yesterday and noticed some scrub ridges were planted in longleaf pine...I drove from Roberta to Butler and I was highly pleased to see that all that poor land that used to be in nothing but blackjack oak is now growing pine trees.”

Although he acknowledged Georgia’s highly successful reforestation program statewide, he agreed with Commission Director John Mixon and others with

strong forestry interests that “we still have a long way to go, particularly in the Piedmont Region, but South Georgia has been quicker to see the value of growing timber than North Georgia. One reason is they get better prices down there.”

Talmadge realizes, of course, that the better prices stem from South Georgia’s great pine belt - the species that is in demand by the state’s 16 pulp and paper mills and many of the sawmills, but he terms it “unfortunate that practically all of the pulp and paper mills are concentrated in South Georgia” and hopes that a greater volume of hardwood pulpwood will someday be utilized and bring new forest industry to the North.

He said he remembered a time, however, when even South Georgia pine wasn’t bringing a great price. “In fact, I remember the first pulpwood that Union Camp bought. It was about 1937 and it sold for fifty cents a unit on the stump...that was the value of it.”

But a greater value was on the horizon and “there were a few pioneers like Harley Langdale and Jim Gillis who could see it.” He said “I was talking to Jim Gillis one day and I asked him how he got into the timber business...now I’m talking about the old man, not Jim, Jr...and he told me that when he got out of the University of Georgia the only people in Treutlen County who had any money were the turpentine folks and the sawmillers.

“He said he figured that he had better get into that business and he started off turpentine and soon noticed how fast a pine tree could grow. They didn’t have seedling nurseries at that time and Jim said they would dig up trees around the creek bottoms and replant them...that was before Roosevelt’s reforestation and conservation commissions.”

FATHER’S VISION

Talmadge said his father also planted trees long before it was a widely accepted practice. “He had a vision that forestry had a future and every time he got a nickel ahead, he would buy a piece of land. He bought this land we’re sitting on right now and it was 2,500 acres with timber on it for \$10.00 an acre. Mr. Cox, who was a saw-miller over here back of the farm, said Papa

ruined the value of timber in the area, as it was going for just \$3.00 per acre.”

Talmadge said that after he was discharged from the Navy, his father gave him a house said to represent Twelve Oaks in the motion picture “Gone With The Wind” and 1,000 acres of land. “I grew everything indigenous to this section of the state,” he said, “but by 1951 I had made up my mind that its best utilization was pine trees.”

He said he continued to plant trees until 17 years ago “when I covered my last acre...if land wasn’t in water, it was in trees. I wanted something you didn’t have to feed, fertilize, plow or hire labor to look after.”

Talmadge, a registered Tree Farmer who conforms to the multiple-use policy of that organization in managing his forest holdings, said “when I quit farming, my quail population declined enormously, but I’ve been planting patches of feed in my pines and the quail are beginning to come since I started control burning.”

ATTITUDE CHANGE

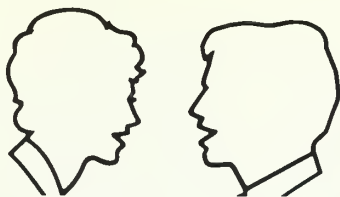
The veteran political leader well remembers the day when forestry in Georgia was considered to be little more than an interesting novelty and those who planted trees in hopes of actually making money were classified as just plain crazy. Fortunately, he has lived to see the day when that attitude has been radically altered.

Talmadge and a handful of other pioneers, such as Langdale and Gillis, witnessed a healthy forest industry in its embryonic stage and were able to look across the years and predict that it would one day pump billions into Georgia’s economy.

Today, forestry in the state contributes \$8.6 billion to the economy and provides employment for more than 80,000 Georgians.

The man who has personally known six presidents, served on the Watergate Investigative Committee and other important panels, and whose name is a household word throughout his native Georgia has come home to his pine forests where neighbors no longer set fire to his trees.

PEOPLE



IN THE NEWS

HERON L. DEVEREAUX, veteran Athens District forester and more recently a manager of special projects, retired effective March 1. A native of Wayne county, he is a graduate of the School of Forest



DEVEREAUX



CRAVEN

Resources, University of Georgia, and came with the Commission in 1959. Many Commission friends and others gathered in Athens February 27 for a party in his honor.....FRANK CRAVEN of Macon, who served in the Commission 32 years prior to his retirement in 1983, has been named a Fellow in the Society of American Foresters. He is one of only five foresters in the Southeast to receive the honor, the highest to be bestowed by the Society...LEVY RENTZ who earned an associate degree in forestry and wildlife at Abraham Baldwin Agri-



RENTZ



HOGG

ltural College, has been named ranger of the Talbot County Forestry Unit. Rentz, son of Col. (retired) and Mrs. Levy Rentz of Idosta, has lived in several states as a member of an Air Force family and attended school in Germany in his youth. He is a member of the United Methodist Church...FORESTER MELINDA HOGG has been transferred from the Urban Forestry Project, Stone Mountain, to the Macon headquarters to work with the Forest Research Department. A graduate of the School of Forest Resources, UGA, she came with the Commission in 1985...LAURA NEWBERN, native of Valdosta and a graduate of Emory University, has been named editor of TOPS, the official magazine of the Georgia Forestry Association. She has been with GFA for ten years as administrative assistant...LLOYD GERS, ranger for Dodge County, retired



NEWBERN



RICHEY

March 1. A native of Eastman, Rogers joined the Commission staff in 1958 as a patrolman. He is a veteran of the Korean War and is currently active in the Masonic Lodge...JAMES W. RICHEY, a senior forester in the



RICHEY



HANSON

Milledgeville District, recently retired from the Commission. He joined the agency in 1956 and was transferred to Milledgeville in 1957 to serve as assistant district forester. A native of Ben Hill County, Richey is a graduate of the School of Forest Resources, UGA. He is a member of the United Methodist Church...KENNETH HANSON, a newly hired aircraft pilot for the Commission, has been assigned to the McRae District Office. He is a native of Treutlen County and a graduate of Treutlen County High School. Prior to joining the Commission aircraft personnel, Hanson was employed as a corporate pilot for Charter Medical Corporation in Macon.

ANNOUNCEMENT WINS!

A 30-second television public service announcement produced by the Commission's Education and Fire Prevention Department captured the 1987 Addy Award Certificate of Merit at the recent annual awards meeting of the Ad Club of Middle Georgia.

The spot, produced by Benjamin Brewton, the department's video producer, was titled "Fire Prevention in Georgia" and featured Lisa Smith, tower operator in the Jefferson County Forestry Unit.

HARDWOOD RESEARCH GROUP PLANS FIFTH ANNUAL COMPETITION

The Hardwood Research Council for the fifth consecutive year will sponsor a competition to recognize outstanding original research on hardwoods. In years past, the Council has alternated competition between forest management and forest utilization. This year's competition is in the area of forest management.

Research scientists in industry, universities, government, and other agencies and organizations are invited to apply as contestants in this award competition. The award is \$1,000 cash. The winning contestant will also be the Council's guest at the award ceremony.

A formal notification of intent to participate in the competition must be received in the offices of the Hardwood Research Council not later than October 3, 1988. Application forms and other details may be obtained by contacting the Hardwood Research Council, P. O. Box 34518, Memphis, TN 38183-0518.

Candidate papers, accompanied by an abstract of not more than 250 words, must be received in the offices of the Council not later than November 30, 1988.

PAPER CHEMISTRY INSTITUTE PLANS MOVE TO GEORGIA

Georgia's reputation as the national leader in the production of paper was further advanced recently when it was announced that the Institute of Paper Chemistry will move its headquarters to the campus of Georgia Tech.

Presently located in Appleton, Wisconsin, the Institute is internationally renowned for its graduate-level education programs and technical research and development initiatives. Alumni of the Institute comprise better than 25% of the engineers and scientists in the entire pulp and paper industry.

When it completes the move to Georgia in 1991, the institute will employ 250 faculty members and researchers and 100 graduate students.

GFA MEETINGS SET

The Georgia Forestry Association, has set dates and a place for its annual meetings through 1992. The convention will be held each year on Jekyll Island. *Villas By The Sea* will be the official lodging designated by the Association. The dates are as follows:

1988, June 12-13; 1989, June 11-12; 1990, June 10-11; 1991, June 16-17; 1992, June 28-29.



“PLT is targeted at school children – the leaders of the future. It is a program with a long-term horizon, as is forestry.”

A forester

Project Learning Tree (PLT) is an unbiased, award-winning environmental education program designed for teachers and other educators working with students in kindergarten through grade 12. The multidisciplinary program supplements, rather than adds to, an educator's teaching requirements. Using the forest as a “window” into the natural world, students gain awareness, knowledge and skills for intelligent and responsible decision-making about conservation practices and resource use. And PLT is fun! It's sponsored nationally by the American Forest Council and the Western Region Environmental Education Council and in Georgia by the Georgia Forestry Association, Georgia Forestry Commission and the Extension Forest Resources/Cooperative Extension Service The University of Georgia.



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Bottomland stands of mixed hardwoods.

A CONCERN FOR HARDWOODS

By Paul Butts

Some Georgia landowners ask why pines are promoted in the tree planting programs, while hardwoods are seldom mentioned.

Many household, consumer, and industrial items are made of hardwood. Furniture stores advertise items made of "solid hardwood", and hardwood is the preferred fuel for home heating. Hardwoods occupy half of the forested area in Georgia, so why isn't there also a concern for these trees?

SUPPLY AND DEMAND

There are several answers. The first one deals with supply and demand. The latest forest survey showed that pine removals exceeded growth in some Georgia counties during the 1970's, while hardwood removals were only 49 percent of growth.

Sawtimber processed in 1986 was 87 percent pine, and pulpwood harvested was 83 percent pine. Since pines are the major species harvested and used in manufacture in Georgia, and the growth to removal ratio of this species group is not nearly as good as for the hardwoods, it stands to reason that pine is where the main concern is for raw material supply.

This does not mean that hardwoods are unimportant. The professional forest manager recognizes these species for their economic contribution. Proper forest management gives consideration to hardwoods on the right site and under the right circumstances. Reforestation, site requirements, and management, however, are all more specific for hardwoods than they are for pines.

There are many reasons why pines are planted as a tree crop much more often than hardwoods.

On suitable sites, commercial hardwoods can be regenerated by natural methods at relatively low cost; therefore, there is seldom any need to plant hardwood seedlings. Regeneration can be aided by removing low quality residual trees that have been left after

harvest, allowing sunlight to reach the forest floor where desirable hardwoods will develop from stump and root sprouts, seedlings, and seed.

Planting pines is especially desirable for sites that have been taken out of agricultural production. Many of these sites are removed from agricultural production because of erosion potential. The evergreen pines intercept rainfall year round and lay down a protective layer of needles which makes them more effective for erosion control, especially during the early years of growth.

Currently, a crop of merchantable pine trees is grown in much less time than a crop of merchantable hardwoods. Twenty-five years is a commonly accepted short rotation for pines, and at 50 years trees are considered mature. On the other hand, a short sawlog rotation for poplar and some other bottomland hardwoods is 40 to 50 years and full rotation age is 60 to 70 years. For upland hardwoods, 60 to 70 years is short rotation, with 80 to 100 years required if significant grade is to develop.

GRADING RIGID

If high quality saw and veneer logs are the goal, 16 inches is minimum size for grade one hardwood sawtimber trees, and a tree this small must be nearly defect free to make the grade. Higher grade means more money, but it also means a larger tree. Larger trees require more growing time in hardwood veneer and sawlogs.

Currently, pine timber in Georgia will often sell for three to five times the price of hardwood on a comparable size and volume basis. This fact makes the larger expense of planting and cultivating hardwood seedlings even more difficult to justify for the average landowner.

Although well managed, good quality hardwoods of commercial species on the proper site can yield a profit to the landowner, planting programs in Georgia will continue to emphasize pines almost exclusively for the reasons stated.

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Ask any professional forester who has ever had a conversation with Lamont Giddens and he or she will readily agree that the Bleckley County landowner is probably the most enthusiastic tree farmer in the entire state!

His exuberance in growing trees and his respect for the technical knowledge that will enhance his pine stands, as well as the multiple use he is making of his forested acreage, has just earned him the title 1988 Georgia Tree Farmer of the Year.

Giddens, who gives his wife, Julie, considerable credit for helping establish the model tree farm, was nominated for the honor by Forester Gregory Long of the Rae District, Georgia Forestry Commission. The announcement of the selection was made by Frank P. Wills of the Federal Timber Board Company, Augusta, who heads the Outstanding Tree Farmer Committee.

QUIT ROW CROPS

Giddens became disillusioned with conventional farming 19 years ago when soybeans, corn and other crops failed to bring a reasonable profit. He began working with Southern Bell Telephone as a telephone repair technician while continuing to farm the unyielding land for a while. He then switched to hay as his principal crop until some eight years ago became interested in trees and declared that he thoroughly "enjoyed planting trees on my land."

At first, he said he "planted trees just for the fun of it, just to see them grow." But now trees with Giddens are serious business. "I still enjoy growing trees," he said, "but now I grow trees with the end result in mind." He said he had to make his land pay. "I'm not a rich pine baron...I've got to consider the bottom line."

Giddens and his wife are often seen at landowner conferences, workshops, seminars and other events that offer information helpful to tree growers. They pore over forestry technical literature and Giddens said he "reads a lot of technical material over and over until I understand it and then carry out my own experiments."

The couple also depends on Forester Long for advice. "The Giddens are big on conservation," Long said. "You can depend on them to do it right." The Commission forester is familiar with every parcel of land on the Giddens farm and marvels at the way they have transformed worn out agricultural fields into a thriving tree farm in just a few short years.

CONTINUE TO LEARN

Long said the landowner and his wife are quite knowledgeable about forestry and will continue to learn. "He termed the couple the 'most enthusiastic advocates of forest management in my district.'"

Giddens planted ten acres of loblolly pine ten years ago, followed by six acres of white and five acres of poplar. He has continued to plant almost every season and today 164 acres are certified as woodlands on his farm.



Tree Farmer Giddens and Forester Long examine new growth.

LAMONT GIDDENS — — TREE FARMER OF THE YEAR

He maintains excellent fish ponds on his property and has planted three game food plots in rye. He has also planted peas for game and crabapple trees for deer that roam his woods.

CRP ADVOCATE

The tree farmer, who was featured in an article in the December, 1986, issue of Georgia Forestry, was quick to take advantage of the Conservation Reserve Program in that year. He received approval to place 86 acres in the program. Since that time he has encouraged others in the area to sign up for the benefits. Although he admits it is difficult to convince some farmers to turn away from the way the land has been used for generations "even if it is eroding," he said he is making some progress as he shares the good news of CRP.

Georgia's new Tree Farmer of the Year has not overlooked the value of natural regeneration. He is encouraging the sprouting and rapid growth of longleaf pine along a ridge near his home.

Giddens recently planted all his remaining hay fields in pine and visitors find it almost unbelievable when they see the rapid growth of the young trees. "The residual fertilizer in the field is probably the cause of the trees

springing up so fast," he reasoned. The landowner said he is "glad to be out of the hay business" and finds more satisfaction in working with trees than with all other crops.

He works full time for the telephone company and devotes about 20 hours each week to tree farm chores. "I also spend about half of my holiday and vacation time here on the farm," he said, "as there are always plenty of things to do."

Wills, who announced that Walter Stephens of Tifton was runnerup in the selection this year, said Giddens is "unique in many ways" and can be an excellent competitor for regional and national competition. C. W. Striping of Camilla, Georgia Tree Farmer of the Year in 1987, won the regional honor and went on to win the national title.

GOOD RECORDS

Wills praised Giddens for keeping a personal ledger of daily farm activities, maintaining a library on forestry literature, hiring FFA students to work on his farm and for his devotion toward conservation in general.

Giddens and his wife were special guests of honor at the recent annual Georgia Forestry Association meeting on Jekyll Island.



A bulldozer turns tree bark to prevent temperature buildup. Below, an automatic unloader accommodates one of many bark hauling trucks.

GEORGIA PLANT UTILIZES MOUNTAINS OF BARK

There is a wide diversity of forest-related industries in Georgia and it includes one that especially enhances the gardens and lawns of homeowners in this state and across much of the nation.

On an average day 20 large highway vans loaded with tree bark will converge on the Hyponex Corporation's plant near Jackson to add to the mountain of raw material that will ultimately find its way into neatly packaged potting soil and decorative nuggets.

And on an average day about 50 vans loaded with the company's products, which also includes fertilizer, peat moss and other earth products, will leave the plant gates for destinations across the nation.

Motorists traveling U. S. Highway 23 that fronts the plant have a good view of several mounds of material on the yards, but they can't see the mountains of bark and other raw materials that spread over 100 acres and creates somewhat of a moonscape atmosphere behind the processing plant.

The 100 acres is in "compost cultivation," according to Jim McSpadden, Southeast Regional Manager for the company which has several plants across the nation that specializes in the manufacture of lawn and garden products. He said it takes about three years for the bark to decompose to the point where it can be used as a component in potting soil. Bark destined for nuggets or mulch take a much shorter route to the processing plant.

McSpadden, a graduate of the University of Tennessee, where he studied chemical engineering, explained that the huge mounds of bark have to be "turned" every six to eight weeks during the de-

composition process. Visitors to the grounds on any working day will find bulldozers busily leveling and then re-creating the large piles.

Gary White, a professional forester with the company, pointed to smoke along a smoldering ridge that was being attacked by bulldozers. He told how spontaneous combustion occurs deep within the pile unless it is turned periodically to prevent heat buildup. He also pointed out that the turning hastens the decomposition process.

When bark is finally broken down through decay to a black, soil-like substance, it is mixed with sand, lime and perlite, an aggregate derived from volcanic rock, to form highly fertile potting soil. Bark processed for decorative landscape purposes, however, is channeled into three packaged products - nuggets, mini-nuggets, and mulch.

McSpadden said bark arriving daily at the plant is purchased from mills within a 100-mile radius. Although some hardwood and cypress bark is purchased, he said pine is preferred and almost all is processed by the company is of that species.

Although the compost operation has been in existence at the plant for several years, the plant was not built until 1983. At that time the company "built equipment from scratch" to separate the cambium layer from bark and automatically size the material as it is fed into hoppers at the bagging stations, according to Tommy Fletch, maintenance foreman.

Mc Spadden said his people, however, didn't have to be as innovative in setting up machinery to package the potting soil. He said they modified the type equipment used by industries that produce french fries, potato chips and similar products.

In addition to providing a lucrative market for area mills that have bark available, the plant buys a finished forest product in great volume. Its warehouses are stacked high with corrugated boxes used to ship many of its products. Although the products are bagged in plastic, the individual bags are packed and shipped in corrugated containers.

McSpadden said all the boxes used by the company come from manufacturers within the state.

Hyponex Corporation's Jackson plant regularly employs 80 men and women, but the labor force is increased to 120 during the production season, which extends from January through May.

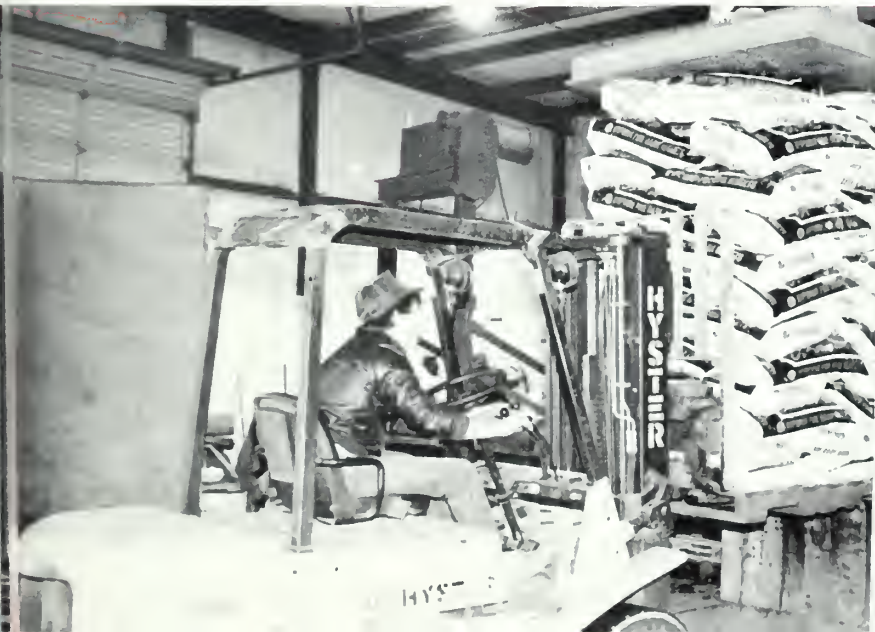
Thanks to the company that employs the work force from Burke and surrounding counties, the bark of Georgia trees that was considered a nuisance and a waste product by sawmillers of another age is now processed, attractively packaged and sold in major department stores, grocery chains and garden centers across the country.





Once worthless pine bark now converted into valuable potting soil, decorative nuggets.

Production scenes around the plant that is providing a substantial payroll to workers and maintaining a market for residue from area mills.



C. M. Stripling
Route 2
Camilla, Georgia

Editor
The Washington Post
3420 Pennsylvania Avenue
Washington, D. C. 31205

Capital Gains Aren't Just for the Rich

Your March 15 editorial on "Capital Gains and Fairness" sure made me mad! A friend in Washington called and read the editorial to me, and I put this response to you in a purple airplane the next day so that he could drop it at your office while it was still hot.

Your statement that 50 percent of the capital gains go to upper-income people may be true, but that means that the other 50 percent goes to those of us in lower brackets. It doesn't take much of a tax increase to put us out of business. If we are going to talk fairness, it shouldn't matter whether you're rich or poor when it comes to how capital gains are taxed.

I just did my taxes, and your comments about millionaires hit me like salt on a sunburnt blister. I finally made a sale on some trees that I've been growing half a lifetime, and the new tax rates are taking 71 percent more of my income than under the old rules. That's a lot of money to me. It would replace my old pickup truck. It would reforest 150 acres of land. It would more than pay for the forestry consultant I hire to make sure my forest is in good shape. The topping on this bitter cake is that the paper work required to complete the process of being fleeced has more than doubled.

In spite of what the tax laws have done to me, I'm going to plant trees to replace those I've cut, and I'm going to hire foresters to keep my forest in prime condition. This farm goes back in my family a long time, and I want it to go forward for my family and others into the future.

I'll continue to take care of my land and send my money to Washington, but I'll feel like I've been treated badly. I've been planting and growing trees for 50 years now, and I've been through forest fires and tornadoes and droughts and ice storms, but the new tax laws are the biggest mess I've ever seen and the most discouraging to tree farmers. If the trend continues, we will eventually do all the work

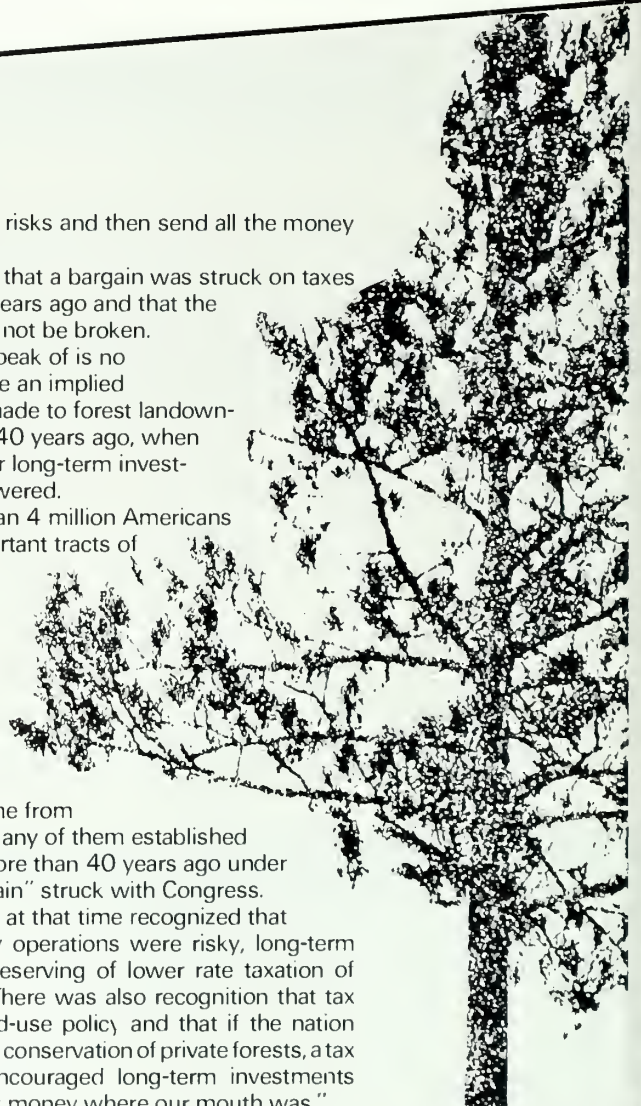
and take all the risks and then send all the money to Washington.

You mention that a bargain was struck on taxes less than two years ago and that the bargain should not be broken. The deal you speak of is no bargain. It broke an implied commitment made to forest landowners more than 40 years ago, when the tax rates for long-term investments were lowered.

The more than 4 million Americans who own important tracts of forest land are unfairly treated under the new rules. These are ordinary folks, who sometimes wait a lifetime for some income from their forests. Many of them established their forests more than 40 years ago under that first "bargain" struck with Congress. The agreement at that time recognized that private forestry operations were risky, long-term investments, deserving of lower rate taxation of capital gains. There was also recognition that tax policy sets land-use policy and that if the nation approved of the conservation of private forests, a tax system that encouraged long-term investments would "put our money where our mouth was."

I think we landowners have kept our side of the long-term commitment. Although some forests certainly aren't as well cared for as I would like to see, overall we have planted billions of trees and constantly improved the application of forestry to the land. Most of us have done this work because we care about the land, but it sure helped to know that we got to keep some of our gains after years of work.

You use a lot of trees in putting out your paper, but your editorial ignored what it takes to grow those trees. Look outside Washington and the law books if you want to know what the system does.



*C. W. Stripling
the writer of
this letter to
the Washington
Post, is the
National Tree
Farmer of the
Year.*





FORMER GAINESVILLE NEWSPAPER OWNER HIRED MONTANA LOGGER FOR 30-YEAR HARVEST

Howard Page, a Montana horse logger who moved to North Georgia for a 30 year logging operation, winds his way through a mountain logging trail with his favorite horse - an 800 pound Belgian draft horse (below), Mark Knept, one of three logging assistants, as he makes logs out into an open area with another large draft horse.

NOW UNDERWAY IN THE NORTH GEORGIA MOUNTAINS

4500-ACRE HORSE LOGGING OPERATION

By Bill Edwards

An environmentally fragile 4,500 acre horse logging operation in the North Georgia mountains - expected to last for 30 years - could mature into a role model for a society becoming increasingly sensitive to environmental needs.

Located near Helen, a mountain resort built to resemble an Alpine Village, the operation's long range objective is to turn the scenic mountainous terrain to a natural state by removing undesirable trees and replacing them with native species. The result will be a high quality forest with a broad species mix. Protected water resources and cultivation of wildlife will be primary by-products. The carefully planned project is designed to gently alter the course of nature.

"Horse logging is ideal for this type of project," said Howard Page, a Montana horse logger who moved his family and business to Georgia to coordinate the project.

"There's no way a mechanized logging operation could maintain the delicate balance of nature required by this job," Page added. "Horse logging is easier on the

land and well-suited for mountainous terrain."

Page is looking forward to many years of involvement in completing the project. The 41-year-old logger grew up in the ranching

and logging country of Montana, so he has a lifetime of experience that prepared him for this job.

Retired Gainesville businessman, Charles Smithgall, who owns the tract, wanted to



make sure he got the right person to coordinate his project. Smithgall, former owner of the Gainesville Times, learned of Page's expertise in horse logging and recruited him for the job. Page is now in charge of three horse loggers and maintenance personnel. The staff is expected to increase over the years in number and types of positions.

Page's job obviously requires a special type of person - an individual with management abilities, yet capable of working alone in remote areas for long periods of time. Anyone finding solitude unappealing could have a serious problem with this job.

"To do this kind of work, you have to like horses," Page said.

Even the most casual observer can see that Page likes his horses and his horses like him. The 1,800 pound Belgian horses seem more like pets than a giant draft breed capable of tremendous feats of strength. When Stanley and Martey (the two horses) are standing near Page, they nuzzle him like puppies.

ANIMALS WELL TREATED

Page treats the horses with similar care and affection. He does not believe in testing their strength or endurance with overwork. He paces activities and log loads so the horses enjoy the work. The technique works well because the horses seem to think pulling logs is a game. Stanley enjoys his work to the extent that he does not have to be guided to the log pile after being hitched up; he enthusiastically makes his way alone up the mountainside logging trail and stands patiently at the log stack until Page arrives and unhitches him. Page then takes the reins and guides Stanley back down the mountainside to repeat the process.

Meanwhile, further up the mountainside, a chainsaw begins to buzz and several carefully selected trees topple. Then there are only sounds of the shady forest as Martey emerges from a thick glade snaking a long log into the open. Mark Knept, one of Page's three loggers, is at the reins and gives the horse a quiet command. Martey freezes and Mark unhitches the load.

Knept is one of Page's three loggers. Page considers him very good and points out that a lot of people want to try horse logging, but give it up shortly when they find it is hard work and the romanticism wears off. Page believes Knept will stay because he shows talent with the horses and likes the work.

Page and Knept meet on the mountainside and decide on the logging schedule for the rest of the afternoon. Then they disappear down the mountain trails with Stanley and Martey.

SOFT COMMANDS

There is very little noise when they work the horses. Instructions are usually a barely audible clucking sound or almost whispered command. Page says all the yelling at horse teams in the movies serves only to impress the audience. He pointed out that a horse's hearing is much more sensitive than human hearing and needs only a soft verbal reminder.



Horse loggers Page and Knept pose with sturdy draft horses (Stanley and Martey) as they take a break from a logging operation expected to last more than a quarter of a century.

In a few hours Stanley and Martey get a good meal of oats while Page and Knept compare notes and decide where they are in this second year of a logging operation that will go well into the 21st century. Their current site is only three days old and almost finished, so they discuss their approach for the next site.

Although horse logging is relatively rare in Georgia, signs of the times indicate it may become more popular as concern for the environment increases and projects such as Smithgall's operation become known to the

"The Key To Successful Horse Logging Is Keeping Skidding Short."

public. The process is also compatible with the landscape manicuring often desired in the preservation of historical sites.

Horse logging is obviously superior to machine logging in certain mountainous terrain and in specialized situations requiring selective cutting and preservation practices. However, in areas that are to be clearcut for any reason, horses cannot compete with machines.

"The key to successful horse logging is keeping skidding distances short," Page pointed out. "If horses skid logs for long distances, then the process is competing with machines."

Short skidding distances are an integral part of the Smithgall operation, since small areas are studied before actual logging occurs. As the previous studies show, some areas will not have to be logged at all. In these

areas, the natural state is so near the objective that nature need only be left to take its course.

The Smithgall project calls for harvesting and reforestation. Kerry Thomas, a former Commission forester who is now a private forestry consultant, created a detailed plan to serve these needs. Thomas works closely with Smithgall and Page as the operation progresses.

PAST INFLUENCES

The Thomas plan shows that past logging operations and gold mining in the area have been influential in establishing an impressive species mixture. On the basis of these findings, the logging criteria favors preservation of white pine, yellow poplar, and well formed species that are at least eight inches diameter. Also favored are all trees important to the cultivation of wildlife; these species include hickories, oaks, American beech, blackgum, maple, dogwood, hawthorn, black cherry, sweetgum, sourwood, and persimmon.

A general guideline for reforestation determined by species occurring naturally in the immediate area. The broad range of species and variety of species on this tract require that small areas be evaluated and treated on an individual basis.

The general evaluation of the project concludes that logging will enhance the quality of the forest, while wildlife will benefit from the increase in woody and herbaceous vegetation. Increasing benefits of soil and water conservation will also be established as an inherent factor of the project.

"This is going to be a long and unusual project," said Page while unhitching his horse in the twilight. "But I'm looking forward every day of it, and I believe the results are going to be appreciated for generations to come."



The Georgia Biennial Fire Equipment Show, held at the Macon Coliseum, attracted a large crowd of fire fighting personnel from all sections of the state for evaluation of the latest fire fighting equipment and techniques.

The all-day meet, sponsored by the Commission, was also attended by state, county and city officials. Terry Coleman, Chairman of The House Natural Resources Committee, and Bubba McDonald, Chairman of The House Appropriations Committee (also a volunteer fireman from Commerce), were recognized as special guests. Speakers included Lee Robinson, Mayor of the city of Macon; John Mixon, Commission director; and Wesley Wells, Commission chief of fire protection.

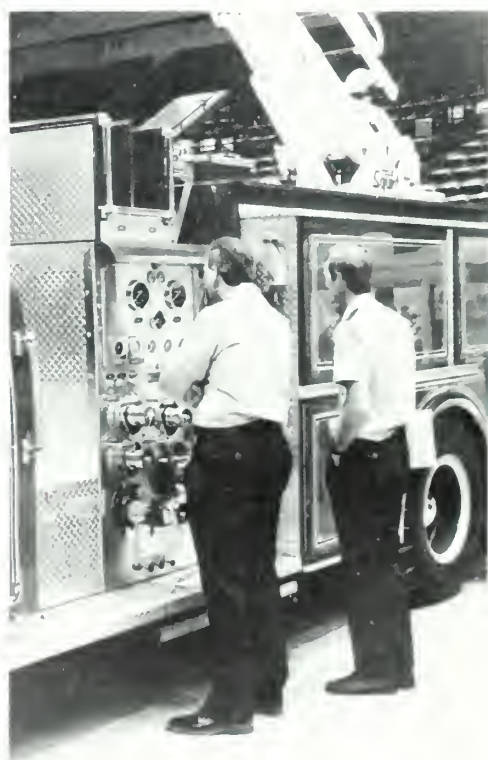
More than 20 exhibitors displayed a variety of equipment ranging from Class A fire trucks to protective clothing. In addition to Georgia exhibitors, equipment dealers from Ohio, Indiana, South Carolina, Wisconsin, Illinois and Arizona were represented.

Numerous Georgia RFD (Rural Fire Defense) co-operators also displayed specialized equipment for rural fire suppression. Although the show emphasized the needs of rural fire fighting units, other examples of the latest and most sophisticated fire fighting equipment and techniques were included.

A barbecue chicken-and-ribs lunch and presentation of door prizes were included in the day's activities. Among the most popular segments of the show were a number of outdoor demonstrations of equipment and fire fighting techniques.



FIRE EQUIPMENT SHOW



MISS GEORGIA FORESTRY 1988 SELECTED AT GFA CONVENTION



KAY ELIZABETH ELLENBERG

Kay Elizabeth Ellenberg, 20, daughter of Manor and Marjorie Ellenberg of Greensboro, was crowned Miss Georgia Forestry of 1988 from a field of 47 contestants to climax the annual convention of the Georgia Forestry Association.

Miss Ellenberg, who said she plans to "become a concerned, effective teacher and later a school administrator," represented Greene County at the event held on Jekyll Island and competed against other young ladies from across the state who had won pageants on the county level.

The new Miss Georgia Forestry, who is an honors student at the University of Georgia, was crowned by Kim Deal of Ware County, the retiring queen.

Glynn County entry Cory McClurd, daughter of Mr. and Mrs. John McClurd of Brunswick, captured second place honors and Candice Moody, daughter of Mr. and Mrs. Larry Moody of Waycross, was third place winner. Fourth place went to Carol Krapp, daughter of Mr. and Mrs. Charles Krapp of Augusta.

The Miss Gum Spirits title went to Jana



Rodgers, daughter of Mr. and Mrs. Rodgers, Jr. of Folkston. She is from Charlton County.

Judges for the state final were Alice Woodbine, Jennie Pullen, Jonathan W. Hibbert of Augusta, Craven of Macon and Jana Rodgers of Brunswick were coordinators.





annual contest.

The association presented the Georgia Forestry Commission Outstanding District Award to the McRae District, which is headed by Forester Grady Williams. District personnel were cited for the outstanding contribution they are making to forestry in the 11-county area.

Awards for Outstanding GFC County Units went to the Emanuel County Unit and

the Clarke-Oconee County Unit. Donnie Price, ranger of the Emanuel Unit, and Thomas Hewell, ranger of the Clarke-Oconee Unit, and their patrolmen were praised for their outstanding service during the year.

In other awards, Lamar Giddens of Bleckley County was officially named Georgia Tree Farmer of the Year (see story page 3) and William Barton, recently

retired executive of Union Camp Corporation, Savannah, was presented the prestigious Wise Owl Award.

Jim Wooten of the Atlanta Journal was featured speaker at the business session of the convention and Jim Sibley, staff director, Governor's Growth Strategies Commission, was keynote speaker. William M. Oettmeier, Jr. association president, presided at the session.



Jana Rodgers, 18, the new Miss Gum Spirits, will represent Georgia's important naval stores industry. She was chosen from among contestants who represented the state's gum producing counties. She is shown with Jim Gillis, Jr., president of the American Turpentine Farmers Association



The Wise Owl Award was created in recent years for presentation at the annual convention to a person who has made major contributions to forestry in Georgia. William Barton, recently retired Union Camp Corporation executive, is the recipient this year and proudly displays the owl

AGRI-BUSINESSMEN WEIGH BENEFITS OF CONSERVATION RESERVE PROGRAM

By Howard Bennett

Lex Strickland, Evans County businessman and tree farmer, heard many alarming stories about the Great Depression from his father and they often sparked a debate on whether or not such an economic disaster could ever happen again in this country.

"I took the side of the argument that contended that we now have safeguards that would prevent such a happening," said Strickland, "but now I believe my dad might have been right after all in predicting another depression. As far as I'm concerned, many farmers are now, or have been, in a real depression here in the eighties."

Activity at a large grain elevator in Claxton - one of several businesses in which Strickland is involved - clearly reflects the plight of the farmers who grow soybeans, wheat and corn. "In the past three years," Strickland said, "the gross sales at the elevator have declined from \$3,500,000 to \$750,000."

Strickland, a University of Georgia graduate in agricultural engineering, reasoned that "if we had kept the old Soil Bank Program intact, we wouldn't be in the fix we're in today. We wouldn't have put all this land back into cultivation to create a surplus."

WASHINGTON PROMISE

He said that in 1972 "farmers were told by Washington that we would never again have a grain surplus and they were encouraged to begin clearing their land to expand their cultivated fields." Strickland said he remembers that "grain farming was really rolling from 1972 to 1980." In fact, he said he was caught up in the trend and when farmers began wanting land cleared and irrigation ponds erected, he saw an opportunity to go into business to accommodate them. After all, there was only one bulldozer for hire in the county at that time.

The Strickland Construction Company was formed and there was plenty of grading and ditching work available at the outset. In 1980, however, soil conservation rules set forth by the federal government drastically changed and row cropping suddenly became less profitable. Trees and underbrush began to take over many abandoned fields.

The change opened the door to reforestation and the heavy equipment previously used to clear the land for corn and soybean cultivation is being used for forest site preparation. Strickland's bulldozers, root rakes and harrows are now seen at work in a 100 mile radius of Claxton.

Strickland applauds the Conservation Reserve Program as a great benefit that has come at a very critical time. He said he is pleased that most Evans County farmers with eligible land are taking advantage of the federally funded program.

"I am definitely in favor of the program," he said, "although I know that it will adversely affect some people in the agri-services business in the small towns. I feel it will help farmers hold on to their land in the long run and the business will eventually return."

He said in working with others in helping draft the CRP he insisted that a substantial

portion of the land be reserved for agricultural crops and that provision guarantees a continuation of farming operations. He was referring to a rule that provides that "acreage placed in the Conservation Reserve Program may not exceed 25 percent of the cropland in any one county."

Evans is one of the state's smallest counties and land available for agricultural purposes is further reduced by Fort Stewart, an Army installation that occupies one-fifth of the county. Strickland estimates 25 to 30 percent of the county is subject to erosion,

but the remainder is classified as lowlands that will not qualify for the program.

One indication that reforestation has become an important concern of the Evans County landowner is the existence of four forest tree nurseries in the county. "They're all growing pine seedlings," Strickland said, "and they're doing well." He said there is no conflict between the locally owned nurseries and those of the Georgia Forestry Commission. "Forestry people have been very helpful to them," he said. "When they need technical assistance, they call on the Commission."

Strickland's enterprising father, the late E. W. Strickland, did extensive farming, ran a trucking company, owned an oil company, operated a sawmill and served eight years in Georgia's House of Representatives during his lifetime. The son has followed in his footsteps by engaging himself in several business enterprises. He is a former chairman of the Evans County Board of Commissioners and is a member of the board of the Claxton-Evans County Chamber of Commerce. He is a lay leader in the Daisy United Methodist Church and has been on the board of the Georgia Farm Bureau Federation for 25 years.

Although he grew up on a farm in the state's pine belt, young Strickland paid scant attention to the surrounding forests. "I only knew about tobacco, corn, peanuts, cotton, cows, hogs, and vegetable plants," he said as he recalled his childhood. He said those basic crops remain important today, but trees have now become a money crop that farmers can no longer ignore.

FAMILY PRIDE

Strickland takes pride in his 300-acre farm with half the land in trees. He also takes considerable pride in his farm-oriented family. Wife Joan, a dairy farmer's daughter from Colquitt County and a graduate of Georgia College, is director of the Evans County Extension Service. Their son, Lex, Jr., is with the Colquitt Rural Electric Membership



Lex Strickland

ALTHOUGH CRP HAS BROUGHT A SHARP DECLINE IN BUSINESS FOR TWO PROMINENT GRANERY OPERATORS, THEY VIEW THE PROGRAM AS THE ONLY ALTERNATE TO KEEP THE FARMER ON HIS LAND.

operation and daughter Suzanne is a economist with the Bibb County Extension Service. They are graduates of the University of Georgia. Other family members work in their professions to help improve the lifestyle of rural Georgians, Strickland does his part by encouraging landowners to take full advantage of the Conservation Reserve Program - a program that is helping many farmers stay on their land during hard times.



Robert L. Sellers is in the business of selling fertilizer and operating a large grain elevator, but he is also one of South Georgia's most vocal advocates of the Conservation Reserve Program - a program that calls for the conversion of certain row crop land to forests, thus eliminating areas where farmers need for much of his services. In adjusting to his company's dwindling profits, the prominent Cairo businessman makes a realistic assessment of today's agricultural situation. He said that when he graduated from Auburn University, with a degree in agricultural administration, he had been taught that in a profit and loss statement "the bottom line had to be in the red."

Sellers said "it is now impossible for farmers in Grady and surrounding counties to depend entirely on row crops, as they can no longer compete in the world market." He feels that a portion of their income should be in managed trees.

Sellers said grain is currently being shipped into this country from Argentina and Brazil at a price that eliminates the American farmer from competition. "We can buy oats from Sweden at a figure lower than the production costs of local farmers...no wonder many of our customers and friends have gone out of the grain business!" he declared.

Sellers considers the Conservation

Reserve Program somewhat of a godsend that is bailing out many farmers who are on the brink of bankruptcy.

"CRP is just another name for Soil Bank," he said, "and I remember what the Soil Bank Program did for my family." He recalls that back in the fifties he advised his parents to place the land on the family farm near Troy, Alabama, in the federally funded program.

"They did," he said, "and that is what saved the farm on these Alabama rolling hills in the time of conversion from sharecroppers with mules to tractors." His parents are now deceased and Sellers and his sister continue to maintain the home place in a well managed tree farm.

Although he has managed his agribusiness at the big elevator in the heart of Cairo since 1956, he has had a genuine interest in reforestation for many years and is well versed in modern forest management. In fact, his forestland in the neighboring state is managed so efficiently that Sellers was named Alabama Tree Farmer of the Year in 1984, an honor never before accorded a Georgian!

But perhaps his zeal for better forest management is best illustrated in an incident that landed him in an Alabama jail for a brief time. Sellers explains: "I am one of the original members of Tall Timbers Research and I attended the earliest fire ecology conferences. Their theory of prescribed fire was to reduce the competition for moisture by burning the understory and leaving moisture for the high value pines.

PUBLIC EDUCATED

"I went to our Soil Bank pine plantation in Alabama to try to put the fire theory in practice and I succeeded on about one-fourth of the land after being carried to jail one night for burning. I had a burn permit from the Alabama Forestry Commission, but the nearby city fire and police depart-

ments had never heard of such a practice or the permit system. They do now!"

Sellers unusual experience apparently served to educate officials and the general public. He said prescribed burning is now a common practice in the area.

The tree farmer said he is distressed to find that so many Grady County farmers are "letting their marginal lands be taken over by low value junk." He notes that the



Robert L. Sellers

most recent survey shows 53 percent of his county's forests are in hickory, gum and cypress "which is the lowest value timber grown."

Sellers contends that too many landowners are overlooking the advantages of planting quality trees on their property "while paying taxes year after year on land that is producing nothing but junk." He points out that sites between cultivated fields could be producing timber that could bring the farmer \$50 an acre per year if managed wisely. "This is in a county," he added, "where pine trees can grow eight feet tall in just three years."

Sellers started harvesting sawtimber in 1981 and sold "a lot of pulpwood" from his forests in Georgia, Alabama and Florida. He is proud of fine stands of poplar and sycamore that thrive on his bottomland property and has replanted poplar and sycamore rather than letting the hickory and gum take over. He has accepted the challenge of establishing longleaf stands by both seedling and direct seeding methods. He scoffs at those who claim it's too difficult to get longleaf to survive the

crucial early grass stage.

Sellers and his wife, Helen, have three married daughters and five grandchildren and he is often asked by acquaintances if he continues to plant trees merely for the future benefit of his heirs. Although concerned with forest resources for future generations and finding it commendable for landowners to plant long-maturing trees for their children and grandchildren, Sellers said all the benefits don't necessarily lie in the future. "When a farmer plants trees on some marginal acreage," he said, "that land immediately increases in value and if, for instance, he wanted to get a loan on the property or sell it, that added value is recognized."

COSTS TRIMMED

Sellers is fond of experimenting with his forests in an effort to trim costs and boost production. In a study conducted at the request of a farm organization, he found he could eliminate the expense of engaging a bulldozer and driver for site preparation work and save some \$75 to \$100 per acre. The experiment was on a 17-acre tract that had been clear cut. He used a chain saw to cut some remaining cull trees and chemicals to kill vegetation. After plowing a firebreak around the plot and waiting for a day of low humidity, he burned the area. The seedlings were all planted by dibble.

Sellers had more time to devote to his land for a five year period during which his grain elevator was "being sold." He said he was paid over 50 percent of his sale price during those five years, only to have the buyer invest in South America the remainder of the money owed to him when the grain embargo collapsed the export market for the Georgia farmer.

When he again took control of the business, he said "the farmers couldn't pay what they owed for fertilizer and not because they didn't want to pay; they couldn't with low prices on the market and the decreasing borrowing power on land."

SOIL BANK SAVES

That's when the Soil Bank came to Seller's rescue just as it did for his parents more than 30 years ago. "My soil bank farm back in Alabama saved me financially in my grain and fertilizer business," he said, "and I was able to restock my farm with improved species." He said he now has a prescribed burning plan to improve wildlife habitat as well as planting bicolor lespedeza, partridge peas, deer vetch and will receive additional income by leasing some land for hunting purposes.

In the true spirit of the certified Tree Farmer who abides by the policy of multiple use of his forest, Sellers is also getting into the pine straw business. He has filled washes on a 1,000 acre forest tract of pine and will cut every other row of trees so a rake can harvest the straw.

"I'll start next season," he said, "because I'll have to burn it off to get rid of limbs and other debris...those Atlanta homeowners

don't like trash in the straw when they use it around their shrubs and flowers."

Sellers had his land in trees long before the Conservation Reserve Program came along, but he is grateful that the program is now available to his fellow landowners who have

eroded acreages and marginal croplands. He knows what a tiny pine seedling can do in the soil and climate of South Georgia and he feels farmers should take advantage of CRP and the Agricultural Conservation Program to get more of them in the ground.

NEW STATEWIDE LAW REQUIRES BURN PERMIT FROM COMMISSION

Beginning July 1, 1988, all Georgia landowners will be required by law to obtain a numbered burning permit from the Georgia Forestry Commission for burning woods, lands, marshes, and other flammable vegetation as designated in the newly enacted "Georgia Forest Fire Protection Act."

Wesley Wells, chief of forest protection for the Georgia Forestry Commission, said the new law provides a more effective solution to controlling smoke dispersion and regulating the number of controlled burns when a dangerous potential for wildfires exist. Wells pointed out that although the "verbal only" notification to burn law is still in effect for certain situations, the new permit law covers the vast majority of burning situations and offers a more tangible method of regulation.

OUTDOOR BURNS REQUIRING PERMITS

According to the new law, the basic requirement for a permit is the burning of any open land except improved pasture and cultivated crop residue (old fields will require a permit). The permit requirement covers the burning of woods or wooded areas - including cutover land. For example, site preparation areas with piles of tree parts would require a permit.

The law applies to county areas outside incorporated city limits.

OUTDOOR BURNS NOT REQUIRING A PERMIT

A significant segment of Georgia landowners exempt from the permit requirement - but still required to give verbal notification - are wheat farmers burning off stubble from fields (this category also covers other farmers burning off stubble from fields).

The law also exempts from the permit requirement the open burning of small amounts of leaves or small brush piles provided the following rules are adhered to:

- that the fire is contained in any approved waste burner located safely more than 15 feet from any structure.
- that the fire be constantly attended by a competent person until it is extinguished.
- that the burning does not create a nuisance.

HOW TO GET A PERMIT

Permits will be issued by all Georgia Forestry Commission county headquarters units throughout the state beginning at 9:00 a.m. Monday through 5:30 p.m. Friday. Permits for burning on Saturday will be issued the preceding Friday between 3:00 p.m. and 5:30 p.m. No burning permits will be issued for burning on Sunday.

All permits are valid for a 24-hour period beginning at 9:00 a.m. on the designated date - except where local ordinances are more restrictive. All county ordinances requiring more restrictive measures for outdoor burning will take precedence over provisions of the new law.

Georgia Forestry Commission officials emphasize that outdoor burns not requiring a permit are still legally required to be reported by the landowner to the local Commission forest ranger or an authorized Commission employee of the local unit. All verbal notifications must be given prior to any intended burn.

The breakfast Maude Hicks cooked consisted of salmon patties, steak, "fatback," scrambled eggs, hoop cheese, biscuits and steaming coffee from a big iron pot.

The year was 1923 and the 13-year-old cook had the awesome task of helping feed a crew of rough lumberjacks in a remote logging camp in the North Georgia mountains. Today, at age 78, Mrs. Hicks has vivid memories of work-long hours with others in the camp kitchen to prepare the meals a day for the hungry men who labored ten hours a day felling trees with crosscut saws and loading logs on road flat cars. "We had no electricity," she said, "but we had plenty of kerosene lamps and we always had good weather." The lumber company would run a pipe line from a mountain spring each time the camp was moved to a new

STARTED AT TEN

Mrs. Hicks said "In those days there just wasn't any work outside the home for a mountain woman unless it was to cook" and she recalled that she got her start by standing in a corner so she could reach the stove to cook cornbread in a pot back when she was ten years old. Her father, Amacus Abernathy, was a blacksmith at a logging camp and her mother served as cook for a time, followed by her sister, Lonabelle. "Lonabelle cooked up there at Camp Number 29 before I did and she would be up there in the wilderness for six weeks without seeing the face of another man."

She said there were a lot of fights and even shooting among the loggers, who were mainly from West Virginia and Pennsylvania, and "Lonabelle had to threaten one with a shotgun, but I never had any trouble with them." Logging railroads were built to bring the virgin oak and cedar out of the mountains and Mrs. Hicks often rode one of the flat cars some 40 miles into the woods to get back to her home after a day or two off from work.

Mrs. Hicks admitted that it was a "rough life, but I enjoyed it because lumber was plentiful and the camps were well built and comfortable, she said. "The camp was a long building with a room for the bunk house for the men, a lobby where they played checkers and cards, and then the kitchen."

SWITCHED TO CAMPFIRES

She said the loggers were known in those days as "wood choppers" and that was another name for "mean." Some went to town for a dance at the end of a hard 60-hour work week, while others stayed in camp to fight or rest or to go out looking for one of the local bootleggers.

Mrs. Hicks became a bride at 17 and left the logging business to accompany her husband, Charlie, on cattle drives through the mountains. It was a new adventure, but she remained a cook. She had traded the old wood burning stove for open campfires along the trails.

Mrs. Hicks, who said she has cut wood with a crosscut saw when the snow was up to her knees and has never found a horse she couldn't ride, is enjoying life at a slower pace now. She lives with her husband in their modest mountain home near Waynesville and looks forward to visits from their three daughters and two sons and their grandchildren and great-grandchildren.

The veteran cook tried her hand in the kitchen of the Waynesville High School a few years ago, but cooking was not the same. She quit. She said dehydrated, frozen and canned foods have taken all the fun out of cooking and working over a gas or electric kitchen range is a monotonous chore compared to broiling and baking and frying with a wood stove in a logging camp deep in the serene forest.

Logging Camp Cook Recalls Early Days



Although Maude Hicks has all the conveniences of modern living in her country home, she often prefers to cook on this wood burning stove. It reminds her of long ago and more adventurous days when she fired up an old wood stove before dawn every working day to help feed a crew of hungry lumberjacks.



Aerial view of Union Camp Corporation's Savannah mill.

UNION CAMP SCHEDULES \$375 MILLION RENOVATION

Union Camp Corporation has scheduled a \$375 million restructuring program for its Savannah pulp and paper operations with completion expected in 1991, according to corporate officials.

Major elements of the restructuring plan include a 460,000 ton-per-year linerboard machine and shutdown of two older, less efficient paper machines. Elimination of 95 percent of emissions of the mill's sulfur odor is also a vital facet of the plan, which will bring the mill into full compliance with pending Georgia regulations governing pulp mill odor emissions.

Describing the benefits of the program, Gene Cartledge, Chairman and chief executive officer of Union Camp, said "The Savannah mill program reduces direct manufacturing costs 12 percent across the entire mill. Total mill output will increase about 10 percent. The plan will also further improve the quality of our products and give the mill greater flexibility to respond to future market conditions."



Cartledge

Already the largest facility of its kind in the world, restructuring of the Savannah complex will add even more positive economic influence to Georgia's forest industry. Union Camp is the state's largest tree farmer with a policy of planting 10 million seedlings annually.

The restructuring plan calls for the replacement of six older pulping lines with a single, large efficient line. This improvement is designed to provide the mill with one of the highest quality pulp sources in the paper industry. The plan also includes installation of a new lime kiln and upgrading of the chemical preparation area. This system, which regenerates chemicals used in the pulping process, will replace old equipment with low energy, low maintenance facilities and significantly reduce sulfur odor emission from the lime burning operation. The Savannah complex has four manufacturing operations - pulp and paper mill, box factory, bag plant, and chemical manufacturing. Advanced forest management practices bring trees on Union Camp lands to full growth in constant replenishing cycles. These advanced techniques in genetics, reforestation, cultivating and harvesting timber establish Union Camp's woodlands among the most productive in the nation. Also, Union Camp's Private Land Utilization Service (PLUS) introduces private landowners to advanced techniques in forest management.

Union Camp has begun engineering for the Savannah complex restructuring project and will begin construction later this year.

"Like all our capital spending programs," Cartledge said, "this program maintains Union Camp's position as the industry leader in cost efficiency. We believe this program, coupled with the benefits of the current upgrade of our Montgomery linerboard mill, will give us industry's most efficient system for producing high quality kraft paper and linerboard."

SYLVAN BRANCH AWARD PRESENTED TO DIRECTOR

Commission Director John Mixon was recently presented the annual Sylvan Branch Award at the Kent Festival of Trees for his outstanding contribution to forestry.

The award was presented at a banquet in Kent, Ohio, a city recognized as "The Tree City" since John Davey established Davey Tree Experts Company there in 1905. The annual ceremony also included the planting of a tree in the city's Grove of Goodwill.

A spokesman for the awards program said the organization not only honored Director Mixon for his distinguished role in forestry, but also commended the Georgia Forestry Commission for its many outstanding achievements in forestry and conservation.

In 1985, Bates Casket Company of Indiana received the Sylvan Branch Award for its reforestation of trees in a national forest as a memorial for each casket sold. Approximately 90,000 trees had been planted in two years.

In 1986, the Weyerhaeuser Company received the award for the reforestation of Mount St. Helen, which erupted in 1980. Weyerhaeuser has replanted over 68,000 acres of damaged land on Mount St. Helen.

In 1987, the award went to the U.S. Forest Service, Pacific Southwest Region for the Penny Pines Reforestation Program. Since 1942, more than 17 million trees of various species have been planted over 49,000 acres.

OOPS, WE GOOFED



Who is this man? In the spring issue of Georgia Forestry the photo of this man was identified as Senator Herman Talmadge and Commission Director John Mixon was published with a caption identifying him as Roy Ware, prominent landowner. Mr. Ware advised, however, that he was not in the picture and the identification was incorrect. If you know the name of this person, Georgia Forestry would like to hear from you so a correction can be made.

INFORMATION FOR LANDOWNERS

Services Offered By The Georgia Forestry Commission

The Georgia Forestry Commission offers landowners throughout the state a variety of information and consultation services proving the slogan: "Reforestation doesn't Cost - It Pays."

An initial service involves inspecting your land and determining an economic use analysis - which includes information on forest taxes and federal cost share assistance. Site preparation consultation covers chemical and mechanical methods; information on controlled burning and vendors is included. Planting is the next step and the Commission's detailed consultation at this stage is critical. Essential information is provided on seedlings (including strains of loblolly and slash pines genetically improved for increased growth rates and disease resistance). Hand planting and direct seeding methods are explained in detail - with information on vendors.

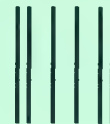
After trees are planted, good management is necessary to obtain a quality crop of profitable timber - and this is where the Commission's long-range consultation and expertise really pays off for the landowner. Forest management plans that increase productivity are offered. Related information on prescribed burning and consultant foresters. Multiple-use recommendations are an important part of this management.

Protecting the growing profits of your forestland is an obvious necessity. Information provided on this topic includes: presuppression break plowing, tower and aerial fire surveillance, and insect and disease control.

When the time comes to harvest your timber, the Commission wants to make sure you get a good price - so valuable consultation on marketing your timber crop is offered. Topics covered in this final phase of consultation include: timber marking, consulting foresters, and natural regeneration (for your next timber crop).



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- _____ General forest management and land use advice
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- _____ Timber marking
- _____ Utilization/marketing
- _____ Prescribed burning
- _____ Reforestation
- _____ Ordering seedlings
- _____ Site preparation
- _____ Insect/disease control
- _____ Vendor information/consultant foresters
- _____ Economic value analysis
- _____ Tax information
- _____ Cost-share programs
- _____ Planting instructions
- _____ Firebreaks
- _____ Forest herbicide use
- _____ Other (please specify) _____

If you have comments on how we can better serve or assist you, please list here:

(please fold and seal)



The Louisville and Pierce County Chapters of the Future Farmers of America tied for first place in the Annual Forestry Field Day Finals which engaged the skills of Georgia's top high school forestry competitors and their advisors in events ranging from ocular estimation to forest management. The competitive meet was held at Commission headquarter's near Macon.

Second place honors went to the Clinch County Chapter competing in the annual event representing the elite of FFA Chapters throughout the state. Each chapter had previously won honors on the regional level. Schools participating in the state finals included: Lumpkin Co., Gilmer Co., Perry High, Crisp Co., Early Co., Stewart/Quitman, Putnam Co., Oconee Co., Pierce Co., Charlton Co., Harris Co., Newton Co., Clinch Co., Echols Co., Harlem High, Louisville High, Bleckley Co., Swainsboro High and West Laurens Co.

First place winners in the various events were Kyle Crosby and Jerome Jones of Pierce Co., Tree Planting; Isreal Hendley of Echols Co., Standing Pulpwood Estimation; Donnie Kirkland of Swainsboro High, Standing Sawtimber Estimation; Holly Mock, of Pierce Co., Tree Identification; Kenny Dixon of Pierce Co., Ocular Estimation; John Owens of West Laurens High, Land Measurement; Jamie Thomas of Clinch Co., Compass; Chris Gordy of Louisville High, Insects and Diseases; Shane Jones of Louisville High, Forest Management; and Robby McKay of Harris Co., Selective Marking. Holly Mock, State FFA vice president, presided at the awards ceremony. David Penter, of Trust Co. Bank presented the awards.



Students and their advisors gathered for the third year at the Georgia Forestry Center for the state finals. The top winning teams below are from Pierce County, left, and Louisville.



CRP **SIGN UP**

JULY 18 - AUG. 5

If you're a landowner you'll want to take full advantage of the Conservation Reserve Program - a federally funded program that shares in the cost of establishing trees on certain erodible croplands and then pays an annual rent on the land for ten years. Thousands of Georgians are already in the program and if you would like to join them, stop by your county office of the Georgia Forestry Commission or the ASCS office for details on eligibility. If you find that you have land that qualifies, sign up for the program from July 18 through August 5 and personnel of the Georgia Forestry Commission will be on hand to answer your questions concerning reforestation on your property.

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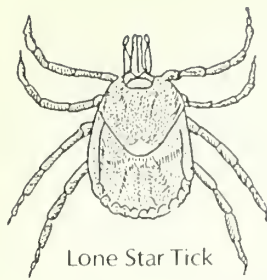


**THE CERTAIN
CHARM OF
A LOG HOME**

Page 4

**THE "TREE ARMY"
55 YEARS LATER**

Page 10

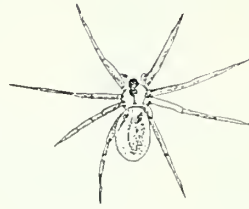


Lone Star Tick

BEWARE

OF TICKS

AND SPIDERS



Brown Recluse Spider

Georgians working and playing both indoors and out this fall should be on guard against ticks and dangerous spiders whose bites can seriously harm and even kill their victims.

According to Terry Price, entomologist with the Georgia Forestry Commission, several tick species found in Georgia and other southern states are carriers of two serious diseases: Rocky Mountain spotted fever (RMSF) and Lyme Disease.

The American dog tick is the primary carrier of RMSF in Georgia, although the disease is also carried by the lone star tick. The disease is caused by a rickettsia that is transmitted when an infected tick decides to feed on a human. The tick usually must be attached for more than six hours in order to transmit the disease-causing organism.

Symptoms of RMSF include fever, headache and a rash that develops around the wrists and ankles and on the back a few days after the bite. It later spreads to all parts of the body, and the infected person may believe he has the flu. The disease is fatal in some cases. In 1987, there were 32 cases of RMSF reported in Georgia but no fatalities.

LYME DISEASE TRANSMITTED BY TICKS

Lyme Disease is caused by bacteria called spirochetes that are also transmitted to humans by tick bites. The disease gets its name from a Connecticut town where it was first described in 1975. Lyme Disease is mainly spread by the deer tick, although the lone star and the California black-legged tick also transmit the disease.

A characteristic rash or lesion occurring a few days to a few weeks after the bite of an infected tick is usually the first symptom of Lyme Disease. Generally the rash looks like an expanding red ring with a clear center but its appearance can vary. The next signs may include headache, stiff neck, fever, muscle aches and/or general malaise. Although Lyme Disease is primarily found in the Northeastern U. S., the disease is beginning to appear in the Southeast.

Price said both RMSF and Lyme Disease present special problems. "Because their symptoms are so similar to flu or other diseases, they are often misdiagnosed," he said. "It usually takes several weeks to get test results back from the lab, and by that time the diseases have become serious."

The entomologist said that ticks should be removed with forceps if possible and should be grasped as close to the mouth parts as possible. He also advised that persons receiving tick bites mark the date of the bite on their calendars. "If symptoms of either Lyme Disease or RMSF appear in two to five days, a physician should be consulted," he said.

BROWN RECLUSE SPIDER DANGEROUS

The brown recluse spider is another potential health threat, Price noted. Easily identified by a dark violin or fiddle-shaped mark on the top front half of its body, the spider is known to infest quiet, out-of-the-way places. Reactions to the spider's bite are often severe. The bite site becomes painful and swollen, and blisters appear on the surrounding skin. The next day, the skin near the bite turns purple, then blackens within the next week as cells die. The dead cells slough off and form a depressed area in the skin.

ON THE COVER - Forest Patrolman Glenn Wheeler had to do some quick thinking and fast moving to save "Bambi" from certain death in a Floyd County fire. (Story on Page 7) Photo by Howard Bennett.

Georgia FORESTRY

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SOUTHWEST COUNTIES SHOW TIMBER DECLINE

A survey of forest resources in the South was begun in 1935 and now the Georgia section of the inventory is being conducted for the sixth time. The survey is made at approximately ten-year intervals.

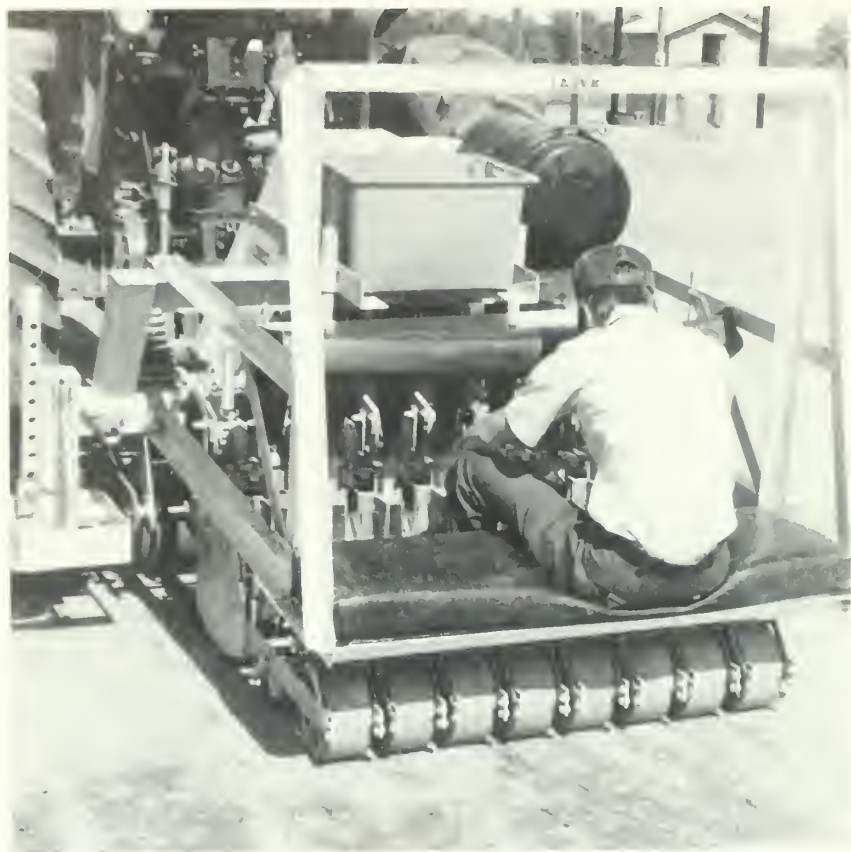
Timberland in a 22-county area of Southwest Georgia, the unit recently completed, declined less than one percent since 1981 and now totals 2.6 million acres. All ownerships combined, removals of softwoods exceeded net growth by 11 percent. Approximately 33 percent of the trees in the area are harvested at age 40 years or younger, thus limiting the number allowed to grow to sawlog size.

These and other statistics were revealed at a meeting in Tifton to inform landowners, forest managers, consultants and others of findings in the first unit survey - an inventory of forests in all aspects and related water and other resources.

The survey, conducted by the U. S. Forest Service and in cooperation with the Georgia Forestry Commission, is also being completed in four other zones in Georgia, which include the Southeast, Central, North Central and North Units. The results of the Southeast Unit will be revealed in November and findings in the other sections will be available next year.

Pine and Oak-pine stands in the one-to-eight year old class in the Southwest Georgia sector increased from 105,000 to 200,000 acres, largely because of an all out effort in planting of agricultural land under the Conservation Reserve Program. A strong effort will be made to persuade landowners to grow these trees into more profitable sawtimber sizes, and to keep the present level of reforestation after the Conservation Reserve Program ends, officials said.

A detailed 54-page report, entitled Forest Statistics for Southwest Georgia, has been published by the U. S. Forest Service. Counties included in the inventory include Baker, Ben Hill, Berrien, Brooks, Quitman, Cook, Crisp, Decatur, Dooly, Early, Wilcox, Irwin, Lanier, Lowndes, Miller, Wilcox, Echel, Seminole, Thomas, Tift, Turner, Wilcox and Worth.



NEW NURSERY SEEDER AT FLINT PRODUCES BETTER SPACED PLANTS

About half the seedlings now growing at the Commission's Flint River Nursery were planted in the spring by a new and sophisticated seeder designed to provide precise spacing that will result in a better, more uniform seedling.

The Love Precision Seeder, said to represent the latest engineering in automatic sowing equipment for nurseries, plants seed approximately one inch apart in eight double rows to the seedbed.

Gregg Findley, forester and nursery manager, said the new equipment is a vast improvement over planting equipment the Commission has been using for several years. "Our old equipment plants seed in eight rows," he said, "and often in an irregular pattern, causing some seedlings to grow bunched together."

Findley said "uniformity is what we're after and this new equipment seems to be the answer." He explained that the planter operates on a vacuum system that evenly spaces the seed "and although it moves slower than our old equipment, it is superior in many other ways."

In addition to achieving a better density control with the new machine, the forester said Flint River, as well as the other Commission nurseries, is giving seedlings more space for growth by reducing the number of seed from 28 to 25 per square foot.

When asked if that slight reduction would make any appreciable difference in growing space for the individual seedling, Findley was quick to answer that "the change will mean an 11 percent decrease in a square foot of seedbed and that's a significant reduction when our overall acreage is considered." He said that "although the per acre production will be less, we will still produce approximately 650,000 seedling per acre for a total of 65 million during the season here at Flint."

Johnny Branan, chief of the Commission's Reforestation Department, agreed with Findley that the Love machine is a superior planter, but he said the Commission has no plans at this time to purchase additional machines. "It's a fine machine and it has been very beneficial in improving seed distribution at Flint, but it moves slower than our other equipment and that's a drawback when there are three large nurseries to sow every spring," Branan said.

He said an evaluation would probably be made before long to determine whether to buy additional machines, which he said are "quite expensive."

There's something distinctly American about log homes, a certain charm that most people find irresistible. Traditionally they have evoked images of the hard work and times of the early American pioneers; of young Abe Lincoln, struggling by candlelight to educate himself; or of cozy mountain retreats, complete with an abundance of wildflowers, icy streams and crackling fires.

In recent years, however, the older concepts of log structures have made room for a newer image; log homes in Georgia are no longer strictly associated with poverty or vacation homes. While just 15 years ago most newly-built log homes were primarily vacation retreats, today more than 95 percent of the log homes built are first homes for young families.

Log homes have made an enormous comeback in the last decade, and the number of new structures built each year continues to rise. In 1986, more than 18,700 log homes -- so called because they are now built in a variety of architectural styles and not just as cabins -- were built in the United States and Canada. During that same period, a total of 877 log homes were built in Georgia. John Ricketson, owner of Hearthstone Log Homes in Forsyth, said his business has gone from selling three or four homes a year to more than 70 in the past few years, and he expects the numbers to continue to climb.

SYMBOL OF INDEPENDENCE

The modern log home has come a long way from the dirt-floor, one-room dwellings of the frontier days. A log home in the 1980's is a symbol of independence, good taste and success. While the traditional one-story cabin with a slanted-roof porch is still popular, other more sophisticated styles are prevalent. Many log homes are two-storied or split-level and are complete with a swimming pool, sauna or recreation

LOG HOMES

They're rustic on the outside, but many have all the conveniences and comforts of the conventional American home. Costs range from \$40,000 to \$300,000.



BY SHERRI BAKER

room. The average price of a log home is around \$112,000, although prices frequently range from \$40,000 to as much as \$300,000.

Why have log homes become so popular? There are several reasons other than prestige and aesthetics. Because wood is one of nature's best insulators -- four times better than concrete block, six times better than brick and 15 times better than stone -- log homes are among the most energy efficient homes on the market. The structures can be tailored to suit the owner's needs and resources and are usually cheaper to build and maintain than conventional homes. Best of all, log homes offer an excellent return on the investment, as some double in market value within 10 years.

Log homes are produced in two ways: by manufacturers and by handcrafters. In the U. S. and Canada combined, there are

235 manufacturers, who account for 85 percent of all log homes built, and 111 handcrafters, who make up the remaining 15 percent.

Log home manufacturers create house designs and construction drawings, produce the logs needed and supply related building materials. They then ship these materials, along with blueprints and a construction manual, to builder/dealer representatives. Sometimes these kits, as they are called, are shipped direct from the factory to the consumer, who either chooses his own builder or erects his own home.

Log homes are ideal for "do-it-yourself" enthusiasts; a sound, safe home can be built from a manufacturer's kit without requiring traditional carpentry skills, at 25 to 50 percent less than the cost of raising a conventional home. In any case, the manufacturers generally work closely with



he builder to ensure proper construction, and a home can be completed within a few short weeks.

Log home handcrafters, or logsmiths as they are often called, typically have much smaller operations than manufacturers. They produce logs the way the early settlers did, cutting and shaping them using only hand tools, and then erect them into a shell for their customers. All other construction work is left for other tradespeople to complete. The logsmiths work in groups with two or three skilled builders to each company. Logsmiths frequently require the assistance of engineers when building the more complex log homes now in demand. The recent rise in popularity of log homes, along with the do-it-yourself trend, has led many handcrafters to offer schools teaching their art.

Homes produced by manufacturers and those produced by handcrafters differ primarily in the logs used. Manufactured logs are uniform in shape at the top and bottom horizontal surfaces which fit together, so that when the logs are stacked to a wall they will fit snugly. In homes built by handcrafters, the logs retain the natural shape of the tree. Because each log is thicker at the butt end than at the top, the logs must be stacked alternately, butt to top and then top to butt, so the wall will remain level. Handcrafted homes are not regulated by any governmental agencies which set standards for quality and safety; however, they are often considered works of art and are truly custom built homes.

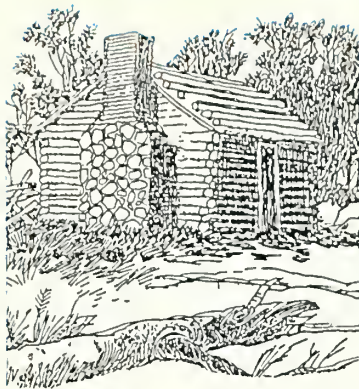
PINE SPECIES POPULAR

Several different types of trees may be used for logs when building a log home, including pine, cedar, spruce, oak, aspen, birch and cypress. Because it is easy to work with, is durable and has a pleasant odor, pine is the most popular choice of Georgians and is found in 80 percent of all home kits.

No matter what type of log the homeowner chooses, however, it is important to realize that many types of logs are susceptible to damage by decay fungi and insects. According to Terry Price, an entomologist with the Georgia Forestry Commission, three factors can lead to problems with log homes: the type of logs used in construction, designs that do not protect logs from wetting and lack of maintenance of exterior wall surfaces. However, there are relatively simple solutions for each of these problems.

Rapid utilization of logs, which simply means removing them from the woods and debarking them as soon as possible after cutting, eliminates many problems with decay and insects, Price said. He added that logs should be treated and properly stored during seasoning. Logs cut in late fall and winter are less susceptible to fungi and insect colonization.

Excessive wetting from rainwaters can cause logs to decay rapidly, especially in warm Southern climates. Traditional



Log homes have traditionally evoked images of the crude cabins of America's frontier days. Even today, many Georgians try to recapture this rustic charm by building small cabins as mountain retreats.

one-story log homes are designed with wide roof overhangs and long porches that are adequate to protect logs from repeated exposure to rainwater; however, most modern log homes are two-story with short roof overhangs and few porches. Properly constructed homes are built so that the wood is protected from too much

exposure and allow for rainwater to drain away from the house on all sides. Other protection includes preservative chemicals, flashing, trim and caulking.

Many pests, such as wood-boring beetles, carpenter ants, bees, wasps and termites can severely damage logs unless proper preventive measures are taken. Logs that have been treated before construction are less likely to encounter the pests, but nearly all types of logs must undergo periodic treatment after the house has been built. On the average, log homes require no more maintenance than conventional homes.

More and more people worldwide are choosing these structures their home; the hottest new market is the Japanese. Talk to any log home owners and it is soon apparent that they are happy with their choice. A year ago, Bob and Jane Cutler, antique dealers from Maryland, were headed to a mobile home retirement community in Florida. However, they were delighted with an authentic-looking modern log home they spotted at a country festival and decided that a log home would be their dream house. Now living near Forsyth, the Cutlers are not disappointed in their new home.

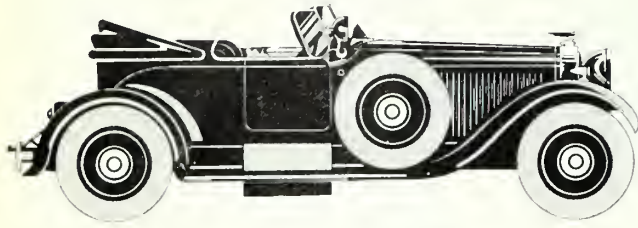
"It's very easy to heat and cool," Bob Cutler said. "We're very pleased with our utility bills."

Jane Cutler agreed that the energy efficiency and easy upkeep made the home more attractive. But perhaps she best captured the sentiment of most log home owners when she said, "When you come inside you really feel like you're at home."



Although traditional styles remain popular, the log homes of the 1980s are more sophisticated, versatile structures and often boast swimming pools and recreation rooms.

WOODEN CAR PARTS



AN INTERNATIONAL BUSINESS FOR GEORGIA ENTREPRENEUR

There is a little known but stalwart legion seeking wooden parts for their cars. This search can be a problem, since many people don't even know that most cars had wooden frames until 1937. Jim Tygart has solved the problem.

Tygart, a 62-year-old Berrien County businessman who owns a Fiberglass and Wood Company, ships tailor-made wooden car parts throughout the United States, Canada and Europe. Although Chevrolet parts are Tygart's specialty, the company also provides parts for other models, including such exotic types as Mercedes. The unusual company, located near Nashville, now turns out so many wooden parts that they have to be numbered on reams of computer sheets.

WOODEN BUGGIES

"I'd say there are only around a half dozen similar businesses in the U.S.," Tygart said. "I don't know of any in Georgia."

Tygart, who has been in the car business in one form or another for about 20 years, said the first cars were actually wooden buggies with motors inserted - green horse hides were stretched over the wooden frame and allowed to dry. He pointed out that Studebaker and General Motors started building buggies - with Studebaker evolving into the nation's largest buggy maker.

"Those were days of high quality craftsmanship," Tygart said, "and the early cars benefited from the situation."

Today, Tygart's company sustains that dedication to craftsmanship. In addition to wooden car frames, the company also manufactures fiberglass replica parts for antique cars and trucks and offers custom made wooden truck beds for antique and late model pickups.

"Wooden frames for cars offers a good, steady business," Tygart said. "But we've had a considerable increase in orders for truck beds. Some of these are restoration pieces, but a lot of them are used for working purposes."

For truck beds, Tygart's company offers a wider range of wood types than for car parts. Wood species used for truck beds include Southern yellow pine, hickory, oak, maple and walnut. Oak and Southern yellow pine are frequently used in working models.

"But car frames are a different story," Tygart pointed out. "The strongest species of wood are required. These frames have to be strong - and they are. We've seen some early Chevys that have been rolled without much damage, when all the wood was in good condition and in place."

Oak and hickory are used for the car skeletons. Tygart considers frames properly constructed from these wood species to be just as strong - if not stronger - than many of today's steel-framed cars. Tygart emphasizes that wooden frames must be precisely cut and fitted. The process requires specialized knowledge and skill that makes businesses like Tygart's rare.

According to Tygart and his employees, to become a skilled "woodcutter" in this business requires from one to three years' apprenticeship. For a talented candidate, with no experience, two to three years is the average requirement, while an accom-



Wood technicians Tim Crumbley (left) and Kenneth Matheson (right) assemble wooden car frame. The technicians are employed by the South Georgia company that specializes in wooden car parts. A wooden auto frame shown is subflooring custom-built 1932 model Chevrolet



Businessman Jim Tygart (left) and Monroe Gaines, Commission ranger for Berrien County, display wooden frames of car doors that were typical on most autos until 1937.

ished carpenter or cabinetmaker will spend a year adapting his skills to the job.

The Tygart company has three woodcutters - in addition to an administrative and shipping staff. Machines used by woodcutters are basic - mainly the band saw, router and planer - the skills are different. Wood must be hand-cut to the exact specifications for lock mechanisms, etc., that high-tech engineering processes measure and stamp in auto factories. Tygart's woodcutting technicians use original wooden parts to make patterns. Tygart says that for car owners checking frames for rot, the process is simple. The only tool needed is an ice pick.

"Check any where water may have gotten to the wood," Tygart recommends. "Areas such as main floor sills, door tops and bottoms, and all top parts." He added that an ice pick can even be used to check through upholstery fabric to check wood underneath - without causing appreciable damage.

ICE PICK TEST

If the wood is soft - it's rotten," Tygart said. "It's as simple as that and the ice pick tells you the depth of the rot."

Tygart says this test works on the vast majority of old cars because the skeletons were constructed with the "hardest of hardwoods" - oak and hickory. His company follows suit by working with oak and hickory, while plywood components are made from solid core maple exterior grade (or oak). The assembly of parts is also part of the woodcutter's job. Bronze, brass, or stainless steel screws, nails, and bolts are used to prevent rust from developing in holes and deteriorating wood. Holes for attaching fasteners are always pre-drilled (even for nails) to prevent splits and wood stress. Upright pieces, such as hinge posts (door posts) that attach to the floor are tightened with metal gussets or corner angles.

Strips of body webbing are installed so shims can be used to fit doors. The body felt is also an effective deterrent to rattles. Corners and joints are not glued because flexibility is required to prevent breakage. Sealing and priming of the wood components provides the finishing touches on a job of meticulous craftsmanship.

As for wasted wood, Tygart says there is very little. Lamination and fitting utilize the smallest pieces. Any scraps that are discarded go into the company wood pile.

At the Tygart business heats with wood, too.

COMMISSION FIREFIGHTER RESCUES YOUNG WHITETAIL

(SEE COVER PHOTO)

Forest Patrolman Glenn Wheeler was working a 74-acre wildfire in Southeast Floyd County when he spotted a small animal trapped in the blazing underbrush.

He quickly leaned out of the cab of his tractor for a closer look and discovered that a young whitetail deer was about to be overtaken by the inferno.

Wheeler, who has had ten years of firefighting experience with the Georgia Forestry Commission, backed his tractor to a safe spot, leaped out of the cab and retrieved the frightened animal which had already suffered a burned leg and singed eyelashes.

"He was wild at first," said his rescuer, "but he calmed down after I got back in the tractor." The patrolman said the deer, which he estimated to be "just a few days old," stayed quietly in his lap for two hours while he finished plowing breaks at the fire.

"We took him back to the unit in Rome in the ranger's pick-up and started feeding him with a bottle," Wheeler said. Bruce Kelley, a young patrolman in the unit, promptly named him Buck and began taking him to his home each night. Kelley's wife, Sandy, became attached to the Bambi-like creature, as did all the men in the unit and they were reluctant to eventually turn him over to the Fish and Game Commission, the agency that returned him to the wild in a game refuge.

Rome District Forester Carl McLearn said he had never known "a deer or any animal" to be rescued by a Commission firefighter prior to Wheeler's experience and termed the incident reminiscent of the rescue of the original Smokey Bear some years ago.

If the young buck ever wanders into hunters territory after he's grown up, at least he won't be a target for Patrolman Wheeler. "I went deer hunting one cold day about 15 years ago and that was enough for me," said Wheeler.



Patrolman Bruce Kelley enjoyed feeding the young deer that was rescued from an inferno by Patrolman Glenn Wheeler. The animal was a tamed pet at the Floyd County Unit for several weeks.

THREE SECTIONS OF STATE HIT HARDEST BY BEETLES

Southern Pine Beetles have continued to attack Georgia's forests in 1988, with more than 3,000 spots, averaging from 25 to several thousand trees, reported statewide.

By mid-summer, the SPB had destroyed more than 300,000 cords of pine, more than enough wood to build 8,000 houses or produce more than 190,000 tons of paper. The attacks have been concentrated in three sections of the state--the coastal region and the upper and lower Piedmont regions. According to Commission Entomologist Terry Price, the upper Piedmont region around Atlanta has been hardest hit by this year's epidemic. Hall County reported the most damage, with 286 identified spots of infestation, while Cherokee County had 280 and Forsyth County reported 258 spots with beetle damage. The counties contain large stands of short leaf pine, the variety most desirable to the pests, Price said.

The bark beetles, which are about the size of a grain of rice, kill trees by attacking their cambium layers, which lie just below the bark and transport water and nutrients throughout the trees. The beetles bore holes into the cambium, lay their eggs and then emerge from the trees to move on to other areas.

Commission officials have urged landowners to cut infested pine stands and to cut a buffer strip around the area to help prevent the spread of the SPB. Price advised, however, that trees killed by the beetles should be left standing because they are no longer harmful and harbor many beneficial insects. The dead trees also serve as a breeding ground for woodpeckers, which are natural enemies of the SPB.

Price said this year's drought, the worst in the state's history, has contributed to the SPB epidemic. "Dry weather stresses trees, and they can't employ their natural defenses to fight off attack," he said.

One built-in defense trees have is their oleo resin pressure (ORP), the entomologist explained. ORP is measured by the amount of resin that trees exude when they have been punctured. Normally trees have enough ORP to force out the invading beetles during mild attacks, but dry weather conditions greatly reduce this pressure.

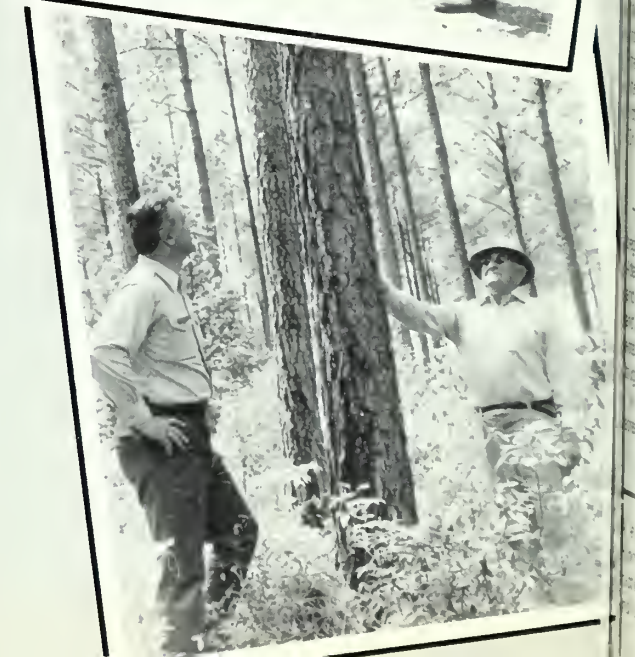
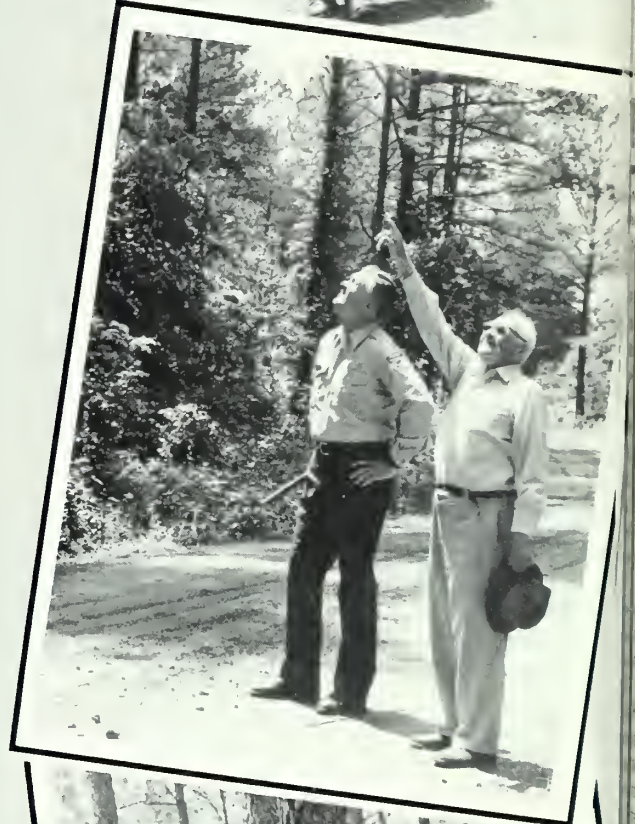
For now, Price said, the worst may be over. "This could be the last surge of the beetles for this year, especially if the weather returns to normal," he said. "But if it continues to stay dry, we may have infested spots pop up all over Georgia."

He pointed out that Alabama, Tennessee and northwestern South Carolina are beginning to experience similar problems with the SPB. The most concentrated efforts against the pests have been in Georgia, however, where five controlled zones have been established. A professional assigned to each zone then assists landowners in salvaging their wood after the SPB have infected the area.

The entomologist added that new research indicates that the SPB become inactive at temperatures of 42 degrees Fahrenheit. Foresters had previously believed that the inactive point was 58 degrees Fahrenheit.

TIMBER LOSS

More than 3,509,900 cords of wood have been lost to pine bark beetles in Georgia since 1972. If stacked four feet high and four feet wide, the damaged wood would extend 5.318 miles!



PENNSYLVANIAN INTRIGUED WITH HIS GEORGIA TREE FARM



Master Tree Farmer Makes Frequent Trips South To Check On His Prized Pines

Dr. Roy Hand is always planning for the future. He recently looked over a field of undesirable hardwood out on his Polk County farm and said he was anxious to clean this out and plant pine this winter."

Dr. Hand is 94.

Forester Grant Evans of the Commission's Game District, who is Dr. Hand's forestry advisor and personal friend, said the retired dentist seems to have the drive and enthusiasm of a 30-year-old as he seeks ways to improve the 240 acres of forests on the long hills of his farm some eight miles from Cedartown.

Evans also confessed that the landowner has greatly broadened my education in forestry by telling me of forestry practices he studied in countries around the world." The scholarly Dr. Hand has traveled extensively in Europe and on other continents and has been keenly interested in forestry management in the foreign lands.

Dr. Hand's home is in Wyncote, Pennsylvania, but he comes down to Georgia periodically to spend some time at his Cedartown apartment and visit his farm, which is maintained by a manager who lives on the property and cultivates the 15 percent of acreage that is not in trees. "Soybeans and corn pay my taxes on the land," declared Dr. Hand.

70 YEARS AGO

The tree farmer's Georgia connection began 70 years ago when he came to the Atlanta area to serve in the military. He met and married a young lady from Polk County. When he returned to Pennsylvania where he established his dentistry practice and she finished school.

In 1943 his wife, Sarah, inherited the acreage that constitutes the farm. When a

vast family estate was settled, his wife was awarded "lot Number 202 on the old trail from Cedartown to Carrollton," Dr. Hand explained, "and the land was so poor that they felt sorry for her and threw in some cash money."

Dr. Hand's first tree planting experience came the following year. He said he examined corn that had struggled to grow on a portion of his wife's inherited property and told her that "that's the last time corn will ever be planted in that field."

CONVERTING TO TREES

When he told her that he intended to plant trees in the field, she shot back that "you're going to lose what little brains you have!" He laughs today as he recalls her skepticism and said he also found her response amusing at the time. She soon joined him, however, in becoming an avid tree planter as they improved and enlarged the forests on their farm.

The timber grown from that first planting in the corn field was harvested in 1979 and brought \$8,250.

In studying forestry Dr. Hand was quick to realize the potential of trees that grow so rapidly in Georgia's soil and climate and during some lean years advised a relative "to beg, borrow or get the \$500 any way you can" so he could buy 40 acres that had been offered for sale. The relative took his advice and by the time his two sons were ready for college, timber on the tract netted \$18,000 to pay for their education.

Dr. Hand retired from his dentistry practice in Philadelphia in 1954 and moved his family to the Georgia farm. He remarried after his wife died and eventually moved back to Pennsylvania after the death of his second wife.

But he remembers earlier days in Georgia when he made frequent trips South. "In 1929, during the days when many sawmills were still steam-powered and a sawyer's wage was a dollar a day and the mill hand earned 85 cents a day," he recalled, "the timber was so huge it took three yoke of oxen to pull a single log from the woods."

Although Dr. Hand's tree farm doesn't yield logs as large as those grown in the twenties, he values them and is careful to select those that are to be harvested. Forester Evans kids the landowner for the way he watches over a harvest operation on his property. "Dr. Hand doesn't mark trees for cutting," Evans quipped, "he goes through the woods with the man with the saw and literally points to each tree he wants to cut!"

Dr. Hand became so knowledgeable about forestry through extensive reading and doing his own research that the late Dr. B. F. Grant, legendary professor at the School of Forest Resources, University of Georgia, once thought that he had been formally educated in forestry and was surprised to learn that he had, instead, studied dentistry and medicine at the University of Pennsylvania.

Former Governor Carl Sanders presented a Master Tree Farmer certificate to Dr. Hand at a special awards dinner in the summer of 1959 and on another occasion he was presented a lifetime hunting and fishing license by former Governor Ernest Vandiver.

GRAFTING AT TEN

Dr. Hand, who claimed he is "more of a researcher than a historian," was born on a farm in New Jersey in 1894. He started grafting plants at the age of 10 and eventually became expert at it. He worked mainly with shrubs and didn't take a great interest in trees until the experience of planting seedlings in Georgia.

Dr. Hand is also a writer and is presently working on his autobiography. He said he is "about half way through and I'll finish in a couple of years." Forester Evans said he will be anxious to read it, "I know it will have some intriguing information on his experience in forestry."

When asked how his fascination with forestry has affected his life, Dr. Hand summed it up in this manner:

"I can feel confident the time I have spent in forestry projects has been a contributing factor to my good health and the many years of my long life."

Forester Grant Evans and Dr. Roy Hand stroll down a country lane to view a field of timber owned by the retired dentist and forestry enthusiast.

Thomas W. Allen was 17 when he first learned of the Civilian Conservation Corps and it didn't take long for him to realize the new program could be his escape from a "sunrise to sunset" job that paid only 60 cents a day.

Allen, recently retired from a career with the Veterans Administration Hospital in Augusta and now living on a farm near Appling, was typical of the young men who enrolled in the CCC more than a half century ago.

The "Tree Army" camps, as they were often called, were quick to spring up across Georgia and the nation following an executive order by President Franklin Roosevelt establishing the Office of Emergency Conservation Work. It happened 55 years ago, but time has not dimmed the memories of many who served in the CCC.



ALLEN

To many Georgians now in their seventies and eighties, it seems as if it were only yesterday when, as young men, they were caught up in the Great Depression, but fortunately found refuge in the Corps. It was a program that eventually provided employment to more than two million young men and "energized the nation's interest in resource conservation" during its nine years of existence.

It also benefited families of the enrollees. The monthly pay in most camps was \$30.00 per month, but the CCC required that \$25.00 had to be sent back home during these hard times.

Prior to joining the Corps, young Allen walked about three miles each day to his job on a farm "down the road" from his country home. He milked cows for his employer at dawn, plowed all day and then milked the cows at the end of the day before beginning his walk back home. In addition to his daily earnings of 60 cents, he was given meals.

The teenager was assigned to a CCC camp in Rock Hill, S. C., one of more than 2,600 camps that were hastily established across the country, with forestry-related projects given high priority.

"We had a tree nursery at our camp," Allen said. "We grew and shipped and planted a lot of pine and poplar, but we also pulled a lot of weeds." He said the camp also had a solution for the badly eroded land in the area, but the "cure" became a curse a half century later! "We cultivated kudzu in one section of our nursery and planted it in gulleys around Rock Hill...we also bundled and shipped a lot of kudzu plants to other sections of the country."

Allen, who later served 40 months in the armed forces in Italy and Sicily during World War II, said the CCC experience "helped all of us have a better appreci-



THE CCC

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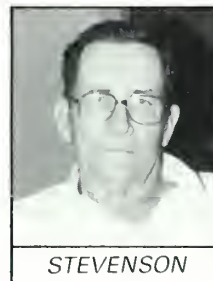
BY R

tion of forestry and conservation and I consider it a time well spent."

Paul Stevenson never heard of anyone actually planting a pine tree when he was growing up on a farm in Telfair County.

The Stevenson farm was surrounded by pine forests, but the trees were more of a nuisance than an asset; they had to be cleared to make way for row crops and pasture. But in July of 1935, the young farm boy began to learn something of the value of trees and the need for better conservation of forests and other natural resources. He had become a recruit in the Civilian Conservation Corps.

"My first camp was north of McRae and near my home," said Stevenson, "and most of the boys in our outfit worked mainly in clearing firebreaks in Telfair and Wheeler Counties." He said trees were cut and the stumps were dug up with hand tools and rolled out of the way. That has been 53 years ago, but Stevenson said some of those fire lanes are still visible today because the Forestry Commission and the paper mills keep them up.



STEVENSON

Several months after helping clear firebreaks in Middle Georgia, Stevenson was transferred to a CCC camp near Norris, Tenn. "We planted a lot of pine and walnut trees up there," he said, "and we cut some prime timber...it was good experience." The enrollee said he had brothers who were also in the CCC and the \$25.00 they sent home each month helped sustain his family during the depression years.

Stevenson, now a retired farmer living near Alamo, said he has fond memories of

the conservation and youth development program. He said he is not only appreciative of the sorely needed financial aid afforded his parents during the bleak days of the thirties, but is grateful for the discipline and values it instilled in him.

Historians claim that that was the attitude of most of the young men across the nation who planted billions of trees, hacked out thousands of miles of fire breaks, reclaimed millions of acres of fertile agricultural land and built roads, bridges, parks and dams while in the CCC.

When Ed Ruark graduated from high school in 1935, he went directly into the CCC. He was assigned to Camp Rutledge near Hard Labor Creek, a short distance from his home.

"In the beginning we cut a lot of big trees with crosscut saws and axes," he said, "to clear a swamp and other lowlands to create a 200-acre lake." He said his particular camp was under the direction of the National Park Service, Department of Interior, "but just like other camps, we lived in army-type barracks, wore uniforms and had to have a pass to go home on weekends."

Although living conditions in the CCC were patterned after the Army in some respects and many of the enrollees would later be drawn into the armed services during World War II, Ruark said the camps "were not militaristic in any way." He said CCC administrators "made a point to keep it non-military."

Ruark was eventually transferred to camp on Pine Mountain where a campurist had been hired to establish a nursery. "I tried to do my work well, even ditch digging," Ruark said, "and I guess I impressed my foreman because I was one of seven chosen to work in the new nursery." He later became an assistant leader or a "straw boss" as he termed it. See groups

THERE ARE FEW SIGNS THAT THE THOUSANDS OF
 STED AND THE RANKS OF THOSE WHO SERVED ARE
 OT THE CONTRIBUTIONS THE CIVILIAN CONSERVATION
 EVIDENT TODAY ACROSS THE LAND.



ETT

source for the tree nursery was the sur-
 rounding forests and certain camp person-
 nel were assigned to gather dogwood, oak,
 pine and other seed to cultivate seedlings
 that were later planted in the Pine Moun-
 tain area.

Ruark said his experience in the camp
 nursery inspired him to seek a career in
 forestry. Following service in the Army, he
 attended the School of Forestry at the
 University of Georgia "with my educa-
 tion partially financ-
 ed with that
 \$25.00 monthly
 stipend that was sent home
 from the CCC and
 covered for me by
 my mother."

As a professional
 forester, Ruark
 went on to be-
 come chief of the Forest Protection Depart-
 ment, Georgia Forestry Commission, and
 later serve as director of the Georgia Forest
 Research Council. Now retired from state
 government, he owns and operates a large
 Christmas tree farm near Bostwick.

Ruark said that in addition to "the ob-
 vious contributions the CCC made toward
 the conservation of our natural resources,
 it was a remarkable character-building pro-
 gram for many young men." He said many
 of the camps in which he served "were
 from poor families and in many cases
 undereducated." He said he and others
 sought night classes in camps.

"Some of the boys went on to become
 outstanding, highly successful men in
 their communities because of the training
 and encouragement they were given in the
 Civilian Conservation Corps," said the
 forester.

U.S. Senator Hugh Gillis of Soperton
 recently agrees with Ruark's summa-
 ry. "President Roosevelt and my father
 were friends and one of the first CCC
 camps came to Treutlen County," he



RUARK

stated in a letter now on permanent display
 along with other CCC memorabilia at a
 stone and log lodge built by enrollees at
 Little Ocmulgee State Park at Helena.
 "Times were hard in those days and many
 fine young men had enrolled in the CCC
 program," he continued. "I don't believe
 there has ever been a government program
 that served such a worthwhile purpose
 and accomplished so much for the person-
 nel involved and for the people of this
 country."

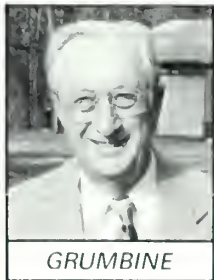
* * *

Art Grumbine earned a degree in fore-
 stry at North Carolina State in 1932, only to
 find that there was little demand for pro-
 fessional foresters in that year of the Great
 Depression. The graduate returned to his
 home town of Lebanon, Pa., where he had to
 be content to work as a substitute clerk in the
 local post office.

The young forester's future brightened
 the following year, however, when applica-
 tion for employment with the CCC was
 approved. He was hired as a cultural fore-
 man at the newly established CCC Camp
 No. 6 on Warwoman Creek in Georgia's
 mountainous Ra-
 bun County.

Grumbine, who
 retired in 1971 as
 Chief of Operations,
 Region Eight, U. S.
 Forest Service,
 fondly remembers
 the people he work-
 ed with in the corps
 55 years ago and
 the lasting influ-
 ence their labors made on forestry and con-
 servation in the region.

"Mountain people are the finest," he
 said during an interview at his home in
 Gainesville. "James Beckley, Claude Smith
 and Fred Beck were three I especially
 remember," said Grumbine, who was in
 charge of timber stand improvement. The



GRUMBINE

three each headed a 20-man crew in the
 program.

He said the North Georgians "most cer-
 tainly impressed me with their native
 intelligence and ability. They knew the
 common name of every tree and shrub."
 The cultural foreman said his crew chiefs
 were "accustomed to doing a full day's
 work and they expected the CCC boys to do
 the same." He said the leaders "undoubt-
 edly served as outdoor role models for the
 boys as they taught them to use hand tools
 and work effectively."

Grumbine, who came with the U. S.
 Forest Service after his CCC experience
 worked in several Southern states before
 he was named to the regional post in
 Atlanta. He said the "pick of the enrollees
 at Camp No. 6 became the backbone of the
 USAF non-technical employees in that
 area of Georgia following their time in
 the corps."

Unfortunately, careless logging crews
 had preceded the CCC boys to the moun-
 tains of Rabun and adjoining counties, an
 area destined to become part of the
 750,000-acre Chattahoochee National
 Forest by presidential proclamation three
 years later. The lumber companies took out
 the virgin timber and moved on, leaving a
 path of wanton destruction. The CCC
 enrollees were charged with repairing
 much of the damage.

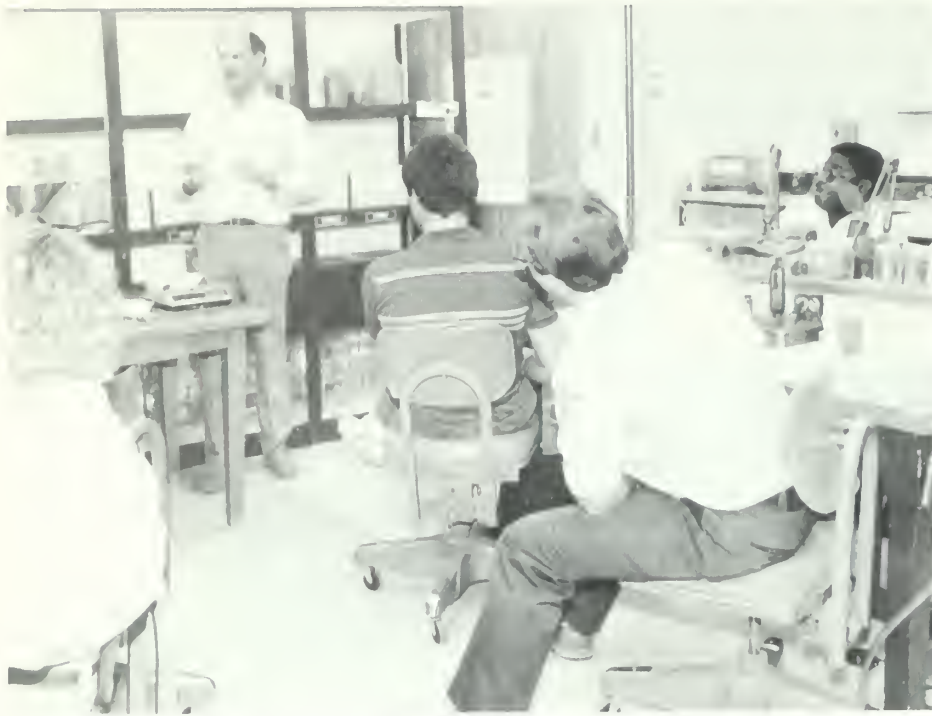
In carrying out the TSI mission, enrollees
 under Grumbine's direction lined up 17
 feet apart early each workday and march-
 ed into the forest to seek out and kill all
 undesirable trees by girdling. Thousands
 of acres of woods down mountain slopes
 and across valleys were rid of worthless
 species to provide a better environment for
 desirable trees.

The national Association of Civilian Con-
 servation Corps Alumni, with headquar-
 ters in Falls Church, VA, pointed out during
 the 50th Anniversary five years ago that
 "the CCC took millions of young men off
 the streets, gave them hope, helped them
 to be self-supporting and taught them how
 to be good citizens. Many learned to read
 and write, obtained a diploma, or learned a
 trade...the CCC started the country's climb
 out of devastating depression...the total
 contribution can never be measured in
 dollars and cents." Grumbine would be
 quick to agree with that assessment.

* * *

Thomas Allen, Paul Stevenson, Ed Ruark,
 Art Grumbine - names on the fading roll of
 those who served in the CCC camps of
 Georgia back in one of the most crucial
 times in the nation's history. They are rep-
 resentative of the thousands of men across
 the state who were once engaged in a
 youthful army to restore depleted natural
 resources.

Many green forests and pastures, rec-
 reational lakes and trout streams, hiking
 trails and wildlife habitats that exist today
 resulted from that massive program that
 helped reshape lives and the land.



Gary Johnson, U.S. Forest Service botanist, teaches class during the annual Tree Seed Testing Workshop conducted by USFS at the National Tree Seed Laboratory on the ground of the Georgia Forestry Center in Macon.

SEED TESTING WORKSHOP HELD

Commission personnel involved with seed testing and production were among other state, federal and private industry representatives from throughout the United States attending the annual "Tree Seed Testing Workshop" held by the U. S. Forest Service National Tree Seed Laboratory in Macon.

Bob Karrfalt, director of the laboratory, coordinated the three-day workshop that concentrated a series of classes on procedures for seed testing and production of seedlings. Karrfalt said Commission employees attending the meet were key personnel assigned to Georgia's seed orchards and nurseries.

Subjects covered in the workshop included: sampling and sample submission, moisture content influences, ger-

mination and effects of stratification, and studies on seed purity. Karrfalt said understanding these and other seed related subjects covered in the workshop tell various personnel working with seeds how well they are doing their jobs. The national seed lab director pointed out that the Macon workshop is currently the only session of its kind in the nation, but plans are being developed for a West Coast workshop to serve similar needs.

"This continuing series of workshops is essential to those personnel in the public and private sectors who work with seeds," Karrfalt emphasized. "Technical advancements are requiring constant adaptations to maximize the quality of seeds and methods required to produce desired seedlings."

EXPORT SEMINAR SCHEDULED

A hands-on workshop designed to assist representatives of the forest products industry interested in developing export markets will be held in Atlanta September 28-29.

The program will include a seminar and personal computer lab instruction by members of accounting software, and forest products firms. Subject areas will include accounting cost and inventory control and the essential steps in the formulation of export quotation.

The seminar, "Coping the Green Gold," will be held at the Georgia Tech Education Extension computer training center

located in the Pierremont Plaza Hotel and Conference Center.

Enrollment is limited and early registration is advised. Interested persons may register by sending a check for \$60 payable to the Georgia Economic Development Fund to John Wells, Georgia Department of Industry and Trade, Trade Division, P.O. Box 1776, Atlanta GA 30301.

The workshop is sponsored by the Georgia Department of Industry and Trade, Georgia Forestry Commission, Authur Andersen & Co., and the International Trade Development Center.

The crowd stood back and looked...and wondered! It was an old turpentine still in full operation and Ernest Carter was there to answer questions of the curious.

The still had been taken apart piece by piece on a farm 150 miles away and reassembled at the picturesque old farm village that has been created by Danny Norman on his Tea Grove Plantation in Liberty County.

The occasion was the annual Old South Farm Days, a weekend when about 10,000 people converge on the little town that features a railroad with a steam powered locomotive, blacksmith shop, old fashioned barber shop, country store, depot, sawmill and other enterprises reminiscent of a bygone era.

The turpentine still is the newest addition to the quaint village that Norman started building 15 years ago. Once the still was fired and wood smoke and the aroma of pine tar drifted across the town, many of the visitors moved up to the still to watch Carter and his helpers produce turpentine and rosin from barrels of raw gum that were brought in from the pine forests.

"There used to be seven turpentine stills within two miles of here," declared Norman, "and now there are none." He said he brought in the still and other village attractions "to show people today how farm and rural village life used to be in this part of Georgia."

The village is popular because it is not a static museum of things of yesteryear, but rather a "working" town where most of the equipment is operational. The turpentine still and the locomotive are fueled with





Danny Norman examines the old turpentine still that was dismantled and reconstructed in his village.

MODEL VILLAGE NOW HAS TURPENTINE STILL

**WORKING STILL BECOMES PART OF A QUAIN T FARM TOWN
CREATED TO SHOW FARMING STRUCTURES AND PRACTICES
OF A BYGONE ERA.**

abs from the sawmill and a proposed team-powered cotton gin will also depend on the little mill for wood to fire its boiler.

When the 38-year-old real estate executive began a search for the still to add to his town, the Commission's Grady Williams, District Forester and naval stores consultant, came to his aid. Williams knew exactly where to look.

The forester remembered that one of the few stills in Georgia that remained intact was out on the T. K. Smith family farm in Wilcox County. He helped Norman make arrangements to buy the still.

When Norman's workmen moved in to salvage the abandoned still, they cut away brush and vines and carefully marked each piece before dismantling the structure.

"We were able to save almost everything," said Norman as he surveyed the still at its new location. "We did have to

replace two corner posts and the floor, but just about everything else, including the tin on the roof, is original." A 12,000 gallon cypress water tank, fire box, some plumbing and other equipment came with the still.

There was a time when small turpentine stills were thriving rural industries scattered across the naval stores belt of South Georgia, but they gradually disappeared as large, modern facilities in Baxley and Valdosta took over the processing for the

gum producers. That's why Norman considers it important to preserve some of that past.

Thanks to the energetic and imaginative Danny Norman, Georgians of this generation and those to come will be able to relive a bit of history when they visit his home town on Old South Farm Days to see a turpentine still in operation and to ride though a fascinating turn-of-the-century village on a train pulled by a puffing, wood-burning 1890 locomotive.



At left, Norman checks the large cypress plank that is part of the working still. At right, he looks over a few thousand gum collecting cups he bought and brought to the village.



Artist's conception of crowded prison camp during war years.

LOG PROJECT ENHANCES HISTORIC ANDERSONVILLE

The approximately 135,000 visitors who pass through the gates of the Andersonville National Historic Site near Americus each year will now be able to see a portion of the prison stockade as it appeared 124 years ago.

Plans to reconstruct a section of the stockade began in 1986 when the National Park Service determined that the exhibit would enhance visitor understanding of the Civil War prison camp that once confined 45,000 Union soldiers. The plan was implemented and construction was carried out earlier this year. Prior to construction, the site was thoroughly investigated by the park service archeologists to determine the log size, alignment, and spacing required to replace a corner of the historic stockade to its original form.

Park officials attempted to find a contractor for the project, but a builder could not be located who would meet the rigid specifications required for the job. In the fall of 1987 Superintendent John Tucker received approval to go ahead with the plans by using donated materials and park staff and volunteer labor.

That is when the nearby Buckeye Cellulose Corporation came to the rescue. Janet McElmurray, public affairs assistant for the company's mill in Oglethorpe, coordinated plans with the park superintendent for Buckeye to donate logs for the project. The

timber was acquired and shipment to the historic site was arranged by John Murphy, the company's southwest manager, and David Sims, Georgia lands and timber manager for Buckeye.

The original stockade was built in 1864 by the Confederacy to confine Union prisoners taken during the Civil War. Nothing, of course, remains of the stockade structure that was 1,620 feet long and 779 feet wide. The stockade line and the

parallel "dead line" inside it, which designated the point beyond which prisoners could not go, are shown today by white concrete posts 100 feet apart.

The reconstruction of the southwest corner of the area includes log posts extending 17 feet above ground, six feet below ground and extending 100 feet in each direction. The section includes two guard stands. Park officials feel the completed corner section greatly enhances the



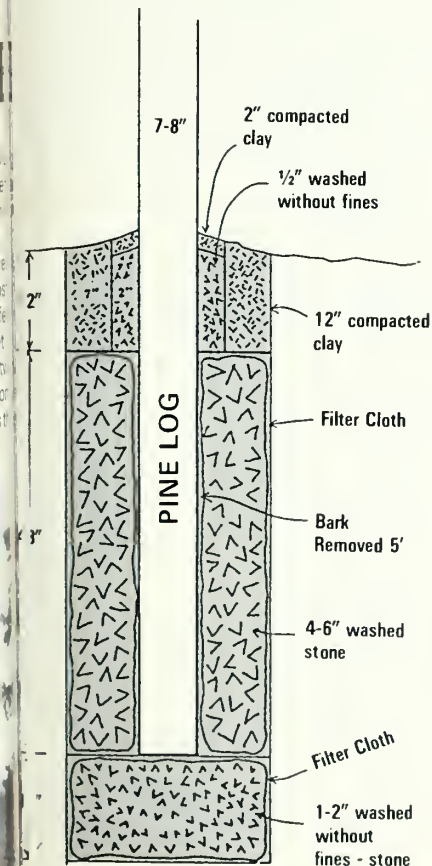
interpretive impact and understanding of the primary historic feature of the site.

Murphy and Sims were honored with a plaque earlier this year by the National Park Service for their continued support in the development of the site. Tucker termed Buckeye "an important neighbor of the National Historic Site and an asset to the community."

Park officials said the pine logs were not pressure treated, as they wanted to retain the bark. In an effort to preserve the underground portion of the logs as long as possible, engineers devised a drainage system by using clay, stones and filter cloth.

There is a possibility two additional corners and the north gate will be reconstructed if funds become available and there is sufficient public interest.

The park complex, consisting of the prison compound and a military cemetery, lies in both Macon and Sumter Counties and the forestry units in those counties occasionally blow firebreaks and provide other services for the historic site when requested. The units also include the federal property in periodic aerial surveillance for pine beetle infestation and forest fire.



left, reconstructed corner of stockage with two guard stands. Drawing above shows system used to try to preserve underground section of poles.

IMPROVED KILN CONTROL DEVELOPED

University of Georgia scientists have developed an automated kiln control system that should improve kiln drying of hardwood lumber and save money by preventing lumber degradation.

The new system computerizes kiln drying by automatically weighing lumber samples and regulating the temperature and humidity inside the kiln.

Dr. Tim Faust of the School of Forest Resources said the system uses a simple balance that operates on a load cell, which weighs the sample board every five seconds. Up to six of these balances are set up at various sites inside the kiln. Using more than one balance allows for more complete information on moisture conditions inside the kiln.

"Keeping a constant check on the moisture content of the wood by weighing lumber samples is crucial in drying hardwoods," said Faust, who developed the computer software and hardware interface that operate the system.

Dr. Derrell McLendon of Agricultural Engineering and Dr. Jim Rice, also of Forest Resources, made preliminary load cell evaluations and assisted in the development of the weight platform.

The new system has already been tested on a laboratory dry kiln at the U. S. Forest Service. Faust has also contracted with the Georgia-Pacific Corporation to test the new system in one of the company's hardwood kilns.



Poster winner displays prize winning Smokey cap for his teacher, Ann Kitchens, right, and Senior Patrolman Sadie Dills, Barrow County Forestry Unit.

BARROW STUDENT WINS NATIONAL PRIZE

A Barrow County elementary school student has won first place in the national 1988 Environmental Poster Contest with a drawing of Smokey bear and Woodsy Owl encouraging beneficial environmental.

Emory Teasley, a fifth grade student at Winder Elementary School, is the only Georgia contestant to win a first place award in the 1988 nationwide contest which involved competition at various levels among thousands of posters. He won the national award after winning at county and regional levels. The contest, sponsored by the National Council of State Garden Clubs, in cooperation with USDA Forest Service and State Foresters, divided the nation into eight regions for the final competition.

Emory won first place nationally in the 3rd - 5th grade division after winning the Deep South Region (six states included) competition. During the winning process, the Winder student was awarded cash and a number of prizes. The national first place award was a specially designed Smokey Bear cap.

Categories for competition ranged from kindergarten to senior citizens. Posters were judged on originality, design, slogan, artwork, and overall effectiveness of theme. All posters were required to be based on an environmental theme. No restrictions were placed on drawing materials. Teasley drew his winning poster in pencil, then added color and shading with magic markers.

Mrs. Ann Kitchens, Emory's fifth grade teacher, said she considers Emory to be a very talented artist who could possibly develop his talent into a career.

Original entry of the Emory Teasley poster was made through a local contest sponsored by the Winder Three Season's Garden Club in cooperation with the Commission.



Observers keep safe distance to watch giant mulch-maker.

STUMPMASTER DEMONSTRATED

They came from California, New York and Canada to see some revolutionary equipment at work and they were not disappointed in what they witnessed.

Joined by Georgians and observers from neighboring states, the visitors from distant points saw a knuckle boom gingerly lift massive tree stumps from a pile of forest debris and drop them into the hog of a machine that immediately ground them into mulch.

The occasion was a public demonstration of the Stumpmaster, a piece of mobile equipment that features a 700 horsepower diesel that is capable of grinding more than 40 tons of stumps, limbs and other wastes into mulch within an hour. Many of those attending the showing at the company's new 21,800 - square-foot plant and office near the North Georgia mountain town of Rising Fawn were prospective buyers of the \$400,000 machine.

Some represented wood related industries, while others were there to inspect the

equipment for possible use by municipalities to reduce the bulk of wood waste at land fills.

Woodmaster, Inc. is actually a family enterprise. Jack Wallin and his wife, Linda, and sons Randy, Mickey, Jackie and Gene founded the business while operating a commercial nursery in Florida, where they had difficulty in locating sufficient mulch for their trees and shrubs. They learned that the shortage was also a problem for other nurserymen along the East Coast and that is when they decided to produce mulch.

Family members designed and built the first machine last year in Boynton Beach, Florida and eight were produced during the first eight months of operation of the new company. During the first weeks of operation after the plant had moved to Dade County in Georgia, machines were sold to buyers in New York and New Jersey, with more than 40 inquiries coming from other sections of the country, according to company officials.

* * *



GFC FLOAT IS SEEN BY QUARTER MILLION

The Georgia Forestry Commission's Smokey Bear has been a part of Atlanta's annual Fourth of July Parade since 1961.

Louie Deaton, urban forester, has been there since the beginning.

"We started out with a truck and a plan of wood," Deaton said, "but the GFC has made a lot of progress since then."

This year's theme, "Tributes to American Greats," took a great deal of time, but Deaton thinks Smokey's annual ride down Peachtree was worth the effort. Over 250,000 people attended this parade, which is the largest July 4th parade televised in the nation.

This year spectators were treated to two adjoining Commission floats. The first with Miss Georgia Forestry, Kay Ellenberg, was followed by a tribute to two American greats, Smokey Bear and his creator Harry Rossoll.

Rossoll was an artist with the U.S. Forest Service when he created his first cartoon version of Smokey in 1943. On August 1, 1944, the bear was christened Smokey and a great American symbol was born. Rossoll's loveable bear has taught millions of American children and adults the danger of forest fires. Deaton pointed out that over 98% of the public recognizes Smokey as a national fire prevention symbol.

Unfortunately, due to the death of his wife, Harry Rossoll was unable to take his seat of honor on the float as planned. Forester John Wells' father, Lloyd Wells, represented Rossoll and the Commission instead.

BUCKEYE NAME CHANGE

The Buckeye Cellulose Corporation, Procter & Gamble Company which has four manufacturing facilities in Georgia has changed its name to the Procter & Gamble Cellulose Company. The company's administrative offices remain in Memphis, Tennessee and all other aspects of the company's operations remain unchanged.

Robert E. Cannon, group vice president of the Procter & Gamble Company, and president of Buckeye, said, "This is a name change only, clarifying our identity with the Procter & Gamble Company, strengthening our bonds and relationships with the rest of the Procter & Gamble family throughout the world." He added that the name change will help in name recognition with the general public.

Procter & Gamble operates the Florida River pulp mill in Oglethorpe and the Barnesville sawmill, which are affected by the name change. The additional two plants, located in Albany and Augusta, have already operated under the Procter & Gamble name.

Smokey Bear - the official USDA Forest Service symbol for fire prevention - is actually alive and well and residing in the National Zoo in Washington, D. C. Smokey will always be alive and well. He will not pass on like the rest of us because when he reaches retirement age for bears, Smokey will be retired into comfortable obscurity and a young replacement will succeed him.

This was not always the situation. Although the symbol of Smokey was established in the 1940s, the first real-live Smokey Bear lived his life from a tiny cub until death by old age (1950-76) in the celebrity spotlight. He died at the ripe, old age of 26 - a long lifespan for a bear equivalent to around 5 or 80 years for a human. Like many celebrities, Smokey even had to be protected at his funeral; he was buried with the protection of state police.

Dick Cox knows Smokey's story well. Cox was as there as an eighth grade youngster when the bear began his Smokey reign as a tiny cub, and he was there in charge of the funeral detail - 26 years later when Smokey was buried under armed guard.

If the theory of fate can be relied upon, some quirk in the cosmic powers must have made the paths of Cox and Smokey Bear cross. "I think it had some influence on my career decision," Cox said. His career decision was to become a forester.

BOYHOOD EXPERIENCE

Cox, director of aviation and fire management for the U.S. Forest Service (Southern Region) in Atlanta, is now 52 years old with 30 years experience as a forester - but he remembers his first encounter with Smokey as if it was yesterday. In May of 1950, Cox was an eighth grade student in Capitan, New Mexico, a town of approximately 800 population. He had the usual interests and pastimes of an eighth grade boy, but when fire broke out in the Capitan Mountain Range, boyhood activities ceased. Every able bodied person was called on to help and the technicality of a job made little difference.

Fire broke out in May of that year and developed into a bad one that spread through Lincoln National Forest like a plague. Before it was stopped - almost two weeks later - more than 35,000 acres had been burned. Cox said the Capitan Mountain Range still bears the scars of that fire.

Everybody from ranchers to insurance companies were called on to assist professional firefighters. Military units from Fort Worth, Texas, were also called out with specially-trained firefighting crews of scalero Indians. Although just an eighth grade boy, Cox found himself driving a truck to deliver groceries to the mountain fire camp, while an eighth grade classmate, Bob Earl, acted as radio operator. The young Bob Earl was the son of Forest Ranger Dean Earl, so the boy was well versed in the seriousness of wildfires.

The pace was grueling as Cox drove his truck back and forth, while Ranger Dean Earl assigned a group of 24 soldiers to fight a sec-



Dick Cox of the U. S. Forest Service points out various items of Smokey Bear memorabilia in his Atlanta office. Cox was on the scene when a young Smokey Bear was rescued from fire and later was in charge of his burial.



FORESTER KNEW SMOKEY FROM CRADLE TO GRAVE

tion of the fire. As they dug a line around the fire, the wind shifted into forty-mile-an-hour gusts that blew leaping sheets of flame at the soldiers and drove them backwards. Finally trapped with nowhere to go, the soldiers ran to a rockslide and lay face down, with wet handkerchiefs over their faces to keep from smothering. As they struggled to breathe, the intense heat caused patches of their clothing to burst into flame. But the group stuck closely together and when anyone's clothes caught fire, the soldier next to him would slap the flames out with his hands.

The soldiers lay there for almost an hour as fire raged around them, gasping for breath and beating out patch fires on their clothing. When the smoke finally cleared enough to see, they stood up from the rock pile to find that all 24 men had miraculously survived the ordeal. They looked around and the only other living thing they saw was a tiny, terrified bear cub that was clinging to a charred limb. The cub had apparently been lost from his mother during the fire and wandered into the area with the firefighters. The mother bear had obviously panicked, gone into the fire area, been cut off by the spreading flames, and burned to death.

Two of the soldiers lifted the little cub from the tree and carried him down the mountainside. Not knowing much about bear cubs, they fed him canned milk and candy on the way down. The little fellow ate all he could hold and became very sick by the time they turned him over to a local rancher, who in turn gave him to Game Warden Bell.

TENDER CARE

Warden Bell took the cub to a veterinarian in Santa Fe. The little bear cried constantly on the way to the vet; his paws and back were badly burned and he was sick from the candy and milk he had gorged on. On arrival, the cub was treated and examined carefully. He was estimated to be around five or six months old, and a bit of a runt for his age. Indications were that he was the smallest of triplets and the other little bears had prevented him from getting his share of the mother's milk.

In spite of bad burns, stunted growth and shock, the little bear recovered when Game Warden Ray Bell returned to Capitan and cared for him. The bear was named Smokey because of the fire ordeal he had

survived. During the recovery period, Bob Cox and other local kids frequently visited Smokey and played with him. Included among Smokey's young guests was Bob Cox' wife Donna, who was also in his eighth grade class.

"We weren't married at the time," Cox said.

As his recovery period continued, Smokey became more and more popular with the children and local adults. Warden Bell came up with the idea of using Smokey as a living symbol for the Smokey Bear fire prevention image that was established in the early 40s. The original Smokey image had been established shortly after Pearl Harbor when state and federal forest protection agencies became alarmed over their loss of manpower to the Armed Services and defense plants. Since statistics showed that more than 90 percent of the forest fires were caused by human carelessness, it was felt that an educational program was the answer and the Smokey image was created as part of the program.

Although the image had been highly successful through the years, Game Warden Ray Bell felt that a real, live Smokey Bear to back up the image would be even more successful. The U S Forest Service in Washington, D. C. was contacted and accepted the idea.

WORD OF SMOKEY SPREADS

By the time Smokey was flown in a small aircraft to Washington, the word had spread. Each time the aircraft landed to refuel, the crowds grew larger with more and more news media representatives waiting to publicize Smokey. Cox remembers that from the very first stages of the idea, Smokey was a success waiting to happen.

When Smokey reached Washington, there was even more excitement and news coverage. The National Zoo provided him with what Cox describes as "the best of accommodations". In addition to the very best diet a bear could have, Smokey also had access to a swimming pool for exercise.

As Cox grew up, Smokey grew up. Cox went to college and graduated with a degree in forestry, while Smokey climbed the ladder to fame as a national figure. After graduation, Cox went to work for the Forest Service (the organization responsible for saving Smokey's life) and Smokey became a household word with numerous products carefully licensed in his name to protect his image (a violation of the Smokey Bear law is violation of the U. S. Criminal Code).

As the years rolled by, Smokey was even provided with a bear girlfriend ("Goldey") in hopes that a natural successor to the position would result; but the relationship did not work out and no little Smokey was produced. Meanwhile, Cox was progressing in his forestry career as Smokey's fame grew; a trip to Australia proved to Cox that

Smokey was also well known on that faraway continent.

It seemed that Smokey was everywhere, using his influence among children and adults to protect the nation's forestlands. He even had his own zip code. In one instance, he showed up in a celebrity cookbook that listed his favorite recipe (Blueberry Cake). In the cookbook, Smokey shares company with such celebrities as John Wayne, Bob Hope, Lawrence Welk and Mrs. Richard (Pat) Nixon.

Another indication of fame is when the National Enquirer takes notice. Two years before Smokey died he was a legend in his own time and the Enquirer, having heard of his failing health, could not resist running a story on the subject.

About this time, Cox found himself back in New Mexico, assigned with the Forest Service to the same Lincoln National Forest in New Mexico where Smokey had been saved years ago. Smokey's failing health was common knowledge now and the people of Capitan requested that the town be his burial place. The request was accepted and Cox was placed in charge of the burial detail.

When the inevitable happened, all the arrangements had been made. Smokey's body was placed in a green pine box and packed in ice. The body was flown from Washington, D. C. to Albuquerque, New Mexico, with plans to drive to Capitan for the burial. However, alterations had to be made to the original plan.

"We heard that a plan was underway to hijack the body," Cox said. "The alleged plan was to hijack the body, remove the claws and sell them for a large sum of money."

Cox said no actual threat ever developed and nobody knew whether there was any truth in the rumor, but at the time no one involved with the Smokey program was

about to take any chances. When the plan carrying Smokey landed in Albuquerque a detachment of New Mexico State Police were waiting to escort the body back to Capitan. Cox remembers the November day well - clear and cold - and the drive lasted three hours.

It was dark when they arrived at the burial spot in Capitan, without incident. But still, no chances were taken. Armed state police remained as the cars directed headlights on the burial site and Cox supervised the digging of the grave.

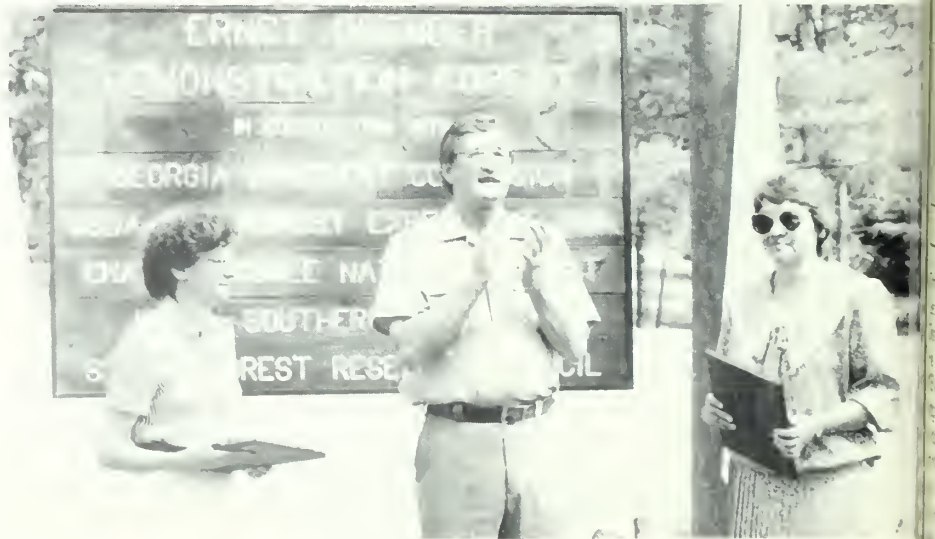
Across the road, a lonely, small town bar reflected faintly colored lights into the cold November night. As the grave digging silently progressed, two Texas deer hunters wandered out of the dim bar, saw the strange activity across the road, and ambled over to investigate. Cox said they were not drunk yet, but "on the way. Despite their semi-inebriated state, the Texans seemed concerned over the proceedings. Both offered assistance and helped lower Smokey's box into the grave.

When it was over, one of the Texans said "Nobody is ever going to believe that we helped bury Smokey Bear."

Today, a large granite stone with Smokey's name on it marks the grave. The surrounding area is a state park - Smokey Bear State Park. Smokey is now the second most recognized symbol in the world; the first is Santa Claus.

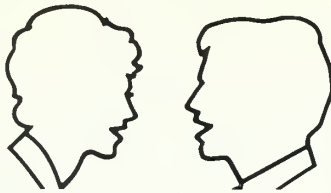
Cox looked out a window of the U S Forest Service office complex in Atlanta, gazing down at a city laced with green belts of tree lined streets and parks clustered with trees - a city that appears to be built in a forest. A city the original Smokey would have liked.

"Yes," Cox said looking out the window, "I believe it had a definite influence on my career choice."



Dedication ceremonies were held recently at the Ernst Brender Demonstration Forest near Juliette, a facility named in honor of the late silviculturist and project leader at the Southeastern Forest Experiment Station in Macon. The forest was established by the Commission in cooperation with USFS and the Southern Industrial Forest Research Council. James Beasley, Station Director, is shown with Brender's daughters, Mrs. Betty Belang left, and Mrs. Susan Bagwell, following the unveiling of a sign at the forest.

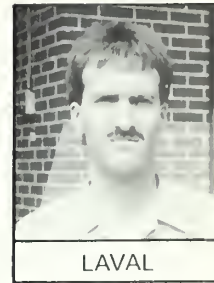
PEOPLE



IN THE NEWS

JOHN W. "COBB" JOHNSON, superintendent of the Horseshoe Bend Seed Orchard since 1962, retired from the Commission recently after almost 35 years of service. He was honored for his many contributions at a dinner given by fellow employees, relatives and other friends. He and his wife, Beverly, live in Penwood where they attend the Meth-

named manager of the new 16-county North District. The new district combines the former Cuthbert and Cordele Districts. Le Bleu directs professional foresters and technicians in serving timberland owners. A graduate of the University of Florida with a degree in forest management, Le Bleu joined F & W in 1975. He and his wife, Charlene, have two children and live in Albany...CHRIS ROLAND of Eastman has been named ranger of the Dodge County Forestry Unit, replacing Ranger Lloyd Rogers, who retired recently after serving in the post 30 years. A graduate of Dodge County High School, the new ranger came with the Commission as a forest patrolman in July 1979. Roland and his wife, Kay, have two sons and they attend



LAVAL



TURNER

experience includes two years in wood procurement and he has also served as an independent forestry consultant for a timber company. Turner graduated from the University of Georgia with BSFR and MFR degrees. Although he was born in Italy and has traveled extensively in Europe, Turner considers Georgia his home.

GOOD TIMBER MARKET EXPECTED TO CONTINUE

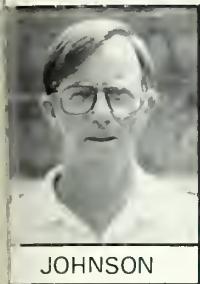
Timber prices in Georgia and the Southeast remained at near record levels during the first half of 1988 but showed some softening late in the second quarter, according to Eley C. Frazer III of Albany, president of F & W Forestry Services.

He said markets for standing timber (stumpage) throughout the Southeast were "excellent" during the first six months of the year and pointed out that "prices received by landowners were at a peak throughout the region, particularly in March and April."

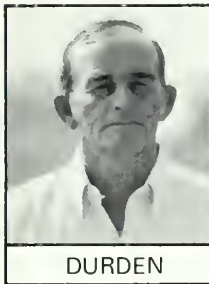
He said some of the price softening that occurred in the second quarter was due to continued dry weather, especially in the northern half of Georgia, which has made for ideal logging conditions. "This helped to produce an oversupply of pine pulpwood in some areas, with many pulpwood producers and woodyards being placed on quotas even though pulp and paper mills throughout the Southeast continued to operate at near capacity and record profit levels," he emphasized.

However, Frazer said that stumpage prices "remained strong overall, with the highest, relatively, being paid for pine sawtimber and quality hardwood" and he also predicted that prices for most classes of standing sawtimber would remain level into the third quarter and the balance of the year.

"Unless an unexpected recession rears its ugly head, I believe the vigorous pace of production and sale of forest products will continue, resulting in continued good markets for standing timber needed to supply the industry," Frazer said.



JOHNSON

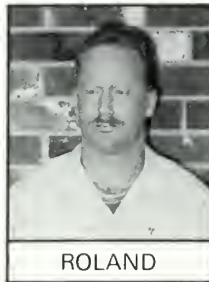


DURDEN

st Church...F. M. (SONNY) DURDEN, assistant superintendent, Walker Nursery, is honored recently as he retired from the Commission after more than 32 years of service. He came with the Commission in 1956 as a nurseryman. Durden served one year in the U. S. Army. He and his wife, Plette, live in Lyons and have two daughters...JOE MATTHEWS, a Rock Hill, S.C., native and a graduate of the

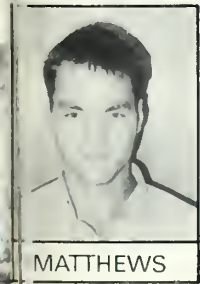


FORE



ROLAND

the Baptist Church...CLARENCE HILLBURN, ranger of the Glynn County for 28 years, retired effective August 31. A native of Newton County, Hillburn is a graduate of Baker County High School. He also studied business administration for three years. The retiree began his career with the Commission at the Cook County Unit in 1956, where he served as ranger. Hillburn, whose wife, Gloria, recently passed away, has two sons, Ricky and Randy. Personnel of the Waycross District will soon announce the date of a party to honor the long-time ranger...FORESTER STEVEN LAVAL, a native of Oklahoma with a degree in forestry from Oklahoma State College, has been assigned to the Bibb County Unit to replace FORESTER CHARLES PLACE, who recently retired. The forester and his wife, Marla, will make their home in Macon...DAVID TURNER has joined



MATTHEWS



K. JOHNSON

School of Forest Resources, University of Georgia, has been assigned to the Tifton District to serve as a management forester. He and his wife, Ricki, have one son...DENNIS R. LE BLEU, Cuthbert District as reforestation forester. He is a native of Detroit, Mich., he is a graduate of the School of Forest Resources, UGA, and is a member of the Presbyterian Church...CHUCK FORE, JR., a Leesburg native and a graduate of the School of Forest Resources, UGA, has been assigned to the McRae District as a management forester. He is a member of the Baptist Church...DENNIS R. LE BLEU, Cuthbert District forester for F & W Forestry Services, Inc., for the past nine years, has been



LE BLEU



HILLBURN

GEORGIA CLAIMS WORLD REFORESTATION RECORD

The massive planting of 603,000 acres of trees in Georgia during the past season is believed to have set a world record in reforestation achievement, according to the Georgia Forestry Commission.

In making the claim, Commission officials explained that it is doubtful that such forest tree planting intensity has been carried out in any other section of the world comparable to Georgia in size.

The record planting stems from a statewide campaign launched in 1983 by the Commission and cooperating organizations to greatly increase timber production to meet future needs of a rapidly expanding forest industrial complex. Landowners planted 370,000 acres in trees during the initial season of the drive and the annual acreage has steadily increased.

Since the kick-off of the campaign five years ago, the number of acres planted in Georgia has increased 95 percent and when only non industrial private landowners are compiled, the figure is 429 percent! Seedling sales from the Commission nurseries since the beginning of the campaign have increased 73 percent.

"It's a tremendous accomplishment," said John Mixon, Commission director, "and although our foresters and support people have worked diligently, we were joined by other agencies, forest industries, farm groups and thousands of individual landowners to make it happen."

The director said "it is the forestry community at large that is responsible for transforming these hundreds of thousands of acres of marginal cropland and vacant fields into rapidly

growing pine stands" and he emphasized that those involved in the drive will continue to promote tree planting, as "there remains a considerable amount of land in our state that should be in trees and, of course, industry's need for the raw forest product continues to grow."

Although the reforestation campaign was rapidly gaining momentum since its inception five years ago, Mixon said "one great advantage came in the spring of 1986." He explained that that was the time Georgia landowners were first asked to sign up for the newly enacted Conservation Reserve Program. The initial response, as well as in subsequent sign up periods, placed Georgia in the lead nationally in the number of landowners participating in the program.

The seventh sign-up ran from July 18-August 31, 1988. Commission foresters are available to advise the landowners who choose the tree planting option of the program. The sign up allows additional landowners to take advantage of CRP, which shares cost of establishing trees on certain erodible and other marginal lands and then pays the owner an annual rent for ten years.

Mixon termed the CRP "one of the best federal programs ever proposed for the private landowner" and said acreage planted in Georgia under the program is expected to exceed the volume planted under the highly successful Soil Bank Program in the late 1950's and 1960's.

The Commission director and other forestry leaders often point out that forestry in Georgia represents an \$8.7 billion industry and is constantly ex-

panding as new wood-using plants move into the state. To assure forestry's economic impact in the future, however, they claim that tree planting activity that has increased so dramatically in practically every county in the state must be continued at a brisk rate.

"We've got to look down the road," said Mixon. "The seedlings we are nurturing today are the forests of tomorrow; they must provide adequate raw material for industry during the first decades of the new century."

In order to meet today's rising demand for seedlings and technical advice on planting - demands that have resulted from the emphasis on reforestation - the Commission established a tree nursery on Flint River to complement existing nurseries and a reforestation specialist was employed in each of the Commission's 12 districts to work directly with landowners.

"Our nursery system now has the capability of producing more than 200 million quality seedlings each season," Mixon said, "and our foresters specializing in reforestation are teaching landowners how to properly transport, store, plant and generally care for the young trees to assure a greater rate of survival."

The director said the 603,000-acre planting record this year doesn't reflect "the many thousands of acres that are being naturally regenerated." He said the Commission in many instances encourages landowners to leave seed trees when harvesting timber, and "let nature do the planting."

According to John Mixon, director of the Georgia Forestry Commission, approximately 640,000

homeowner. The appearance of pitch tubes and the yellowing needles are generally the first symptoms of the disease.

Forestry taking seedling
The Georgia Forestry Commission has released its seedling price schedule.
Jan. 15 and Feb. 15 hardwoods will be landowner.

SECOND CLASS POSTAGE PAID AT MACON, GEORGIA

According to John W. Mixon, director of the State Forestry Commission, approximately 640,000

Mixon said, "But the many...
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nor Joe Frank Harris reported that the State's goal - set one year ago - to replant one acre for every acre of timber harvested is close to being

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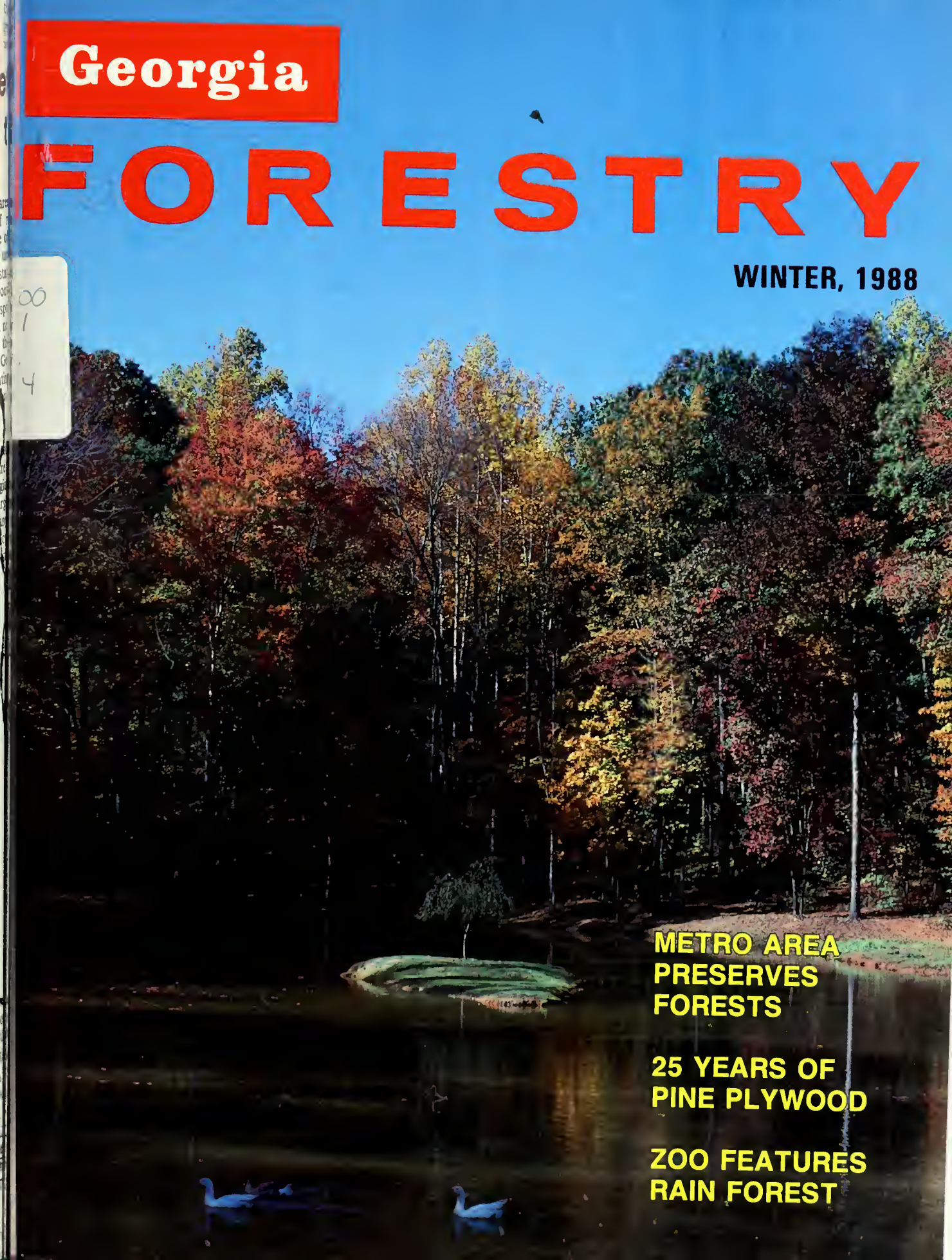
WINTER, 1988

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**METRO AREA
PRESERVES
FORESTS**

**25 YEARS OF
PINE PLYWOOD**

**ZOO FEATURES
RAIN FOREST**





FEDERAL AID GIVEN MANY TREE FARMERS FOR LOSSES DURING SUMMER DROUGHT

Many Georgia tree farmers who had seedlings killed by the devastating 1988 drought are being offered federal assistance to help replant their acreage.

The Tree Assistance Program (TAP) is being administered by the Agricultural Stabilization and Conservation Service, with the Georgia Forestry Commission acting as the agency for technical assistance.

"Georgia was fortunate to receive the largest share of the federal money, about \$1.6 million, and it should go a long way in helping timberland owners to reestablish seedling stands lost in the 1988 drought," according to Larry Thompson, associate chief of forest management with the Commission.

"Tree seedlings planted under the Conservation Reserve Program are not eligible for TAP funds," explained Thompson, "because they are covered under special CRP provisions for replanting assistance."

The three areas eligible under TAP for replanting are forest seedlings (TAP-1); Christmas tree plantings (TAP-2); and fruit, nut, and syrup seedling plantings (TAP-3). Only seedlings planted during 1987 or 1988 qualify.

Thompson said TAP qualifications and payments are made on an individual stand basis. "Qualifications include individual eligibility, on-site inspection, tree mortality exceeding 35 percent plus normal mortality, and proof of 1987 or 1988 planting. Cost share assistance is set at up to 65 percent of the actual cost for the reestablishment."

Seedlings reestablished through TAP must be maintained for a minimum of five years after the calendar year of planting, ten years if the replanted stands received prior federal cost-share assistance. Fire and grazing prevention for the stands is also mandatory to be eligible for federal aid.

ON THE COVER - Scenic lake nestled within an office complex near Atlanta provides a haven for ducks. Although the 75-acre forested area borders a busy interstate, careful planning has preserved a naturally shaded environment for wildlife and office workers. (Photo by Bill Edwards.)

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It has been almost a year since the Georgia Forest Landowners Council merged with the Forest Farmers Association to form the Forest Farmers Association Governmental Affairs Program, and officials of the lobbying group say that it has been an unqualified success. A landowner's perspective is being voiced on nearly every piece of proposed congressional legislation.

In looking back at the success of the first year, it is interesting to note that it all began with a few concerned Georgia landowners who banded together to combat their biggest foe: tax reform.

In February of 1988, Forest Farmer's Association took action to strengthen its lobbying efforts by merging with the Georgia Forest Landowners Council. In doing this, they also retained the services of GFLC's governmental affairs representative C. Randall Nuckolls, an attorney with Kilpatrick & Cody in Washington and former legislative counsel for Georgia Senators Herman Talmadge and Sam Nunn.

Georgia Forestry Commission Director John Mixon was the principle designer of the Georgia Forest Landowners Council, largely in response to the Tax Reform Act of 1986. Director Mixon says his motivation to start the organization was based solely on the availability of Randy Nuckolls.

"I had been working around Washington for quite some time with the National Association of State Foresters, and I found out that there was one person who could open more doors and get more done than anyone else; that person was Randy Nuckolls," says Director Mixon. "So when I heard that Randy was going to leave Senator Nunn's staff to go into private practice, I decided there just had to be a way to keep him in forestry. I contacted a few landowners that I knew were concerned about recent developments in Washington, and they quickly agreed to fund retention of Randy as a Washington representative."

LANDOWNER SUPPORT

Two of the Georgia landowners who were at the initial meeting to establish the Georgia Forest Landowners Council were Tom Resseau and Nat Hardin. Both of these men were among those who agreed to fund the organization based on that first request from Director Mixon.

Like most landowners, Tom Resseau was concerned with the passage of the Tax Reform Act which eliminated exclusion of long-term capital gains. "I've been in the timber business a long time and I have studied the tax laws and their effect on timberland owners, and I can tell you that there is no other economic force that can take or break the landowner like the tax laws," says Resseau.

Resseau believes that a capital gains dif-



Commission Director John Mixon, left, discusses forest tax problems with reporter Jason Anthoine.

ORGANIZERS OF UNITED GOVERNMENTAL AFFAIRS GROUP CITE INITIAL SUCCESS

ferential will have to be restored in order for private non-industrial timberland owners to survive.

Resseau is typical of private non-industrial landowners in the South. He was once a dairy farmer, but gave up that business some years back for timber growing. "My grandfather had quite a bit of land in Putnam County but over the years, due to the depression and hard times, the family holdings dwindled to almost nothing," explains Resseau.

"When I returned from World War II, I inherited 200 acres of land from my mother's estate. This was my first attempt at forestry, since what wasn't in row crops, I put in trees. Since that time, I have gradually been rebuilding my family's land holdings and have taught myself forestry along the way. I still have not rebuilt all of my family's land holdings, but I'm working on it," Resseau says.

Passage of the Tax Reform act of 1986 was certainly a setback for Resseau and his goal of rebuilding the family land holdings, but he believes that its passage is only the beginning of a much bigger problem timberland owners will have to face over the next few years. Resseau feels that the biggest obstacle facing timber farmers is that "the U.S. Congress is becoming more and more dominated by congressmen from urban areas. These are people who want to wash away problems of the big cities with our tax dollars. We are going to need strong representation in Washington if we are going to have a chance to regain

some of the tax advantages we have lost and to head off further legislation that damages timber growers. This is one of the reasons I supported forming the Georgia Forest Landowners Council," says the Eatonton native.

FUNDS PROVIDED

Another of those individuals at the first meeting who agreed to fund the hiring of Randy Nuckolls as a Washington representative was Nat Hardin of Forsyth.

Nat Hardin's timber roots go back as far as the Civil War when his great-grandfather started sawing lumber. His father and grandfather opened a planing mill in 1905 and Hardin has been working in the family business ever since, taking time off for the army and college at the University of Georgia and Harvard Business School.

The family sawmill burned in 1969, but Hardin didn't let that scare him away from timber. He found out that he could make a better profit selling timber than he could by cutting and manufacturing lumber.

Hardin was interested in starting the Georgia Forest Landowners Council as soon as Director Mixon told him of it. "The loss of capital gains hurt us. It hurt everybody who makes a living from long-term investment, but especially timberland owners. When John Mixon told me that Randy Nuckolls was available to represent the interests of private timberland owners, I knew right away that it would be to our advantage to hire him to work on restoring capital gains and other issues that affect the

interests of landowners," says Hardin.

When the proposal came for the Georgia Forest Landowners Council to merge with the Forest Farmers Association, everyone, including Tom Resseau and newly-elected chairman of the council Nat Hardin, thought it was a good idea. "It's the greatest thing that could have happened," says Resseau. "The issues being attacked by Randy Nuckolls are issues that affect all landowners in the South, not just Georgia. By having Forest Farmers' support behind him, Randy will be in a much better position to get things done than with just the support of one state."

"Forest Farmers has always done a wonderful job of representing the interests of private landowners," says Hardin. "There is no better organization to oversee the lobbying in Washington. Our challenge now is to convince every landowner in the South that together we can make a difference in Washington and we can change the way

"...This is our chance to do something to help ourselves."

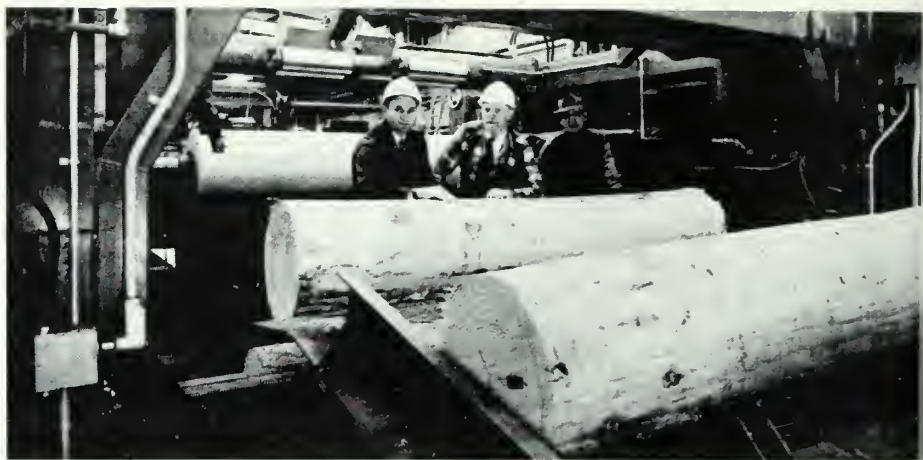
things are. We need to fund Forest Farmers Association's legislative program, and we need to support it through our own contacts with our own representatives in Washington. This is our chance to do something to help ourselves."

Resseau and Hardin weren't the only ones instrumental in founding Georgia Forest Landowners Council. Other Georgia landowners who helped to start what is now the Forest Farmers Association Governmental Affairs Program were Fred W. Greer of C&S National Bank, host of the first meeting; William A. Pope, of Washington, Georgia; J.M. "Buddy" Tolleson, Jr., president of Tolleson Lumber Company, Perry; William C. Humphries, Jr., Forest Resource Consultants, Inc., Macon; Andy Stone, president of Stuckey Timberland, Eastman; Cecil M. Hodges, Jr. Sandersville; and C. M. and Charles Stripling, the 1988 National Tree Farmer of the Year and his son, of Camilla.

Organizers of the Forest Farmers Association Governmental Affairs Program said they are well pleased with the progress that has been made and feel that all forest landowners are beginning to benefit from the merger of the two organizations in its united effort. ▲

(EDITOR'S NOTE: This story includes excerpts from Forest Farmer, Sept. 1988 issue)

4/Georgia Forestry/Winter 1988



Officials of Georgia-Pacific, a major producer of plywood from Southern pine, tour one of the company's 16 plywood plants.

RESEARCH 25 YEARS AGO LED TO DEVELOPMENT OF PINE PLYWOOD

With Southern pine plywood such a workhorse of the construction industry, it is hard to believe that 25 years ago it practically didn't even exist!

Prior to 1963, the bulk of plywood was made from Douglas fir, according to Forester Paul Butts, Commission wood utilization expert. "Douglas fir was used because it had an even texture, turned well on the lathe, and glued well using lower-priced glues," Butts said.

"But the problem with using the lower-priced glues was that they weren't water repellent, which caused some disastrous construction results.

"So the industry started looking for an alternative wood, one that would be cheaper to use, so it could be paired with the more expensive water-repellent glues.

"The preliminary experiments with Southern pine were failures. The large hard knots caused problems with the lathe turning and what usually came off was a pile of splinters," he said.

Then research developed a way to steam the pine logs before turning them, making the knot softer and less likely to splinter, said Butts.

"This process worked, and when combined with a new water-repellent glue, the Southern pine plywood industry was born and Southern pine plywood became the plywood of choice because of its lower price and stronger durability," Butts said.

The first manufacturer to capitalize on Southern pine plywood was Georgia-Pacific. Their first plant, which recently celebrated its 25th anniversary, went up in Fordyce, Arkansas in October of 1963. Not long after that, G-P opened a large operation in Savannah that ran for more than 15 years.

"It is also interesting to note," said Butts,

"that modern manufacturing processes allow for a 'combination plywood' of Southern pine and another soft-hardwood, usually gum or poplar. This is a good way to conserve resources without compromising the stiffness of the wood."

Today, Georgia-Pacific operates 16 Southern pine plywood plants in eight states, including plants in Georgia at War Springs, Madison and Monticello. They are part of a \$1.5 billion industry made up of 59 plants across the South. The 1987 output from all these plants, if laid flat, would cover about 40 percent of Rhode Island.

Using Southern pine plywood was a risky gamble, at best, but a risk that has certainly paid off handsomely for the manufacturers and the construction industry at large.

FLINT NURSERY PRAISE

One of the nation's leading experts on forest soils and nurseries was favorably impressed following a tour of the Commission's recently established Flint River Nursery.

Professor Jack T. May, a retired faculty member of the University of Georgia School of Forest Resources, described the new facility as possibly "...the best nursery site in the Southern Region; and maybe the United States and in the world."

In a letter to Commission Director Joe Nixon, Professor May indicated the nursery's potential with the following statement: "The next step is to produce the best quality seedlings in the region. This will require considerable skill, knowledge and judgment."

The Flint River Nursery toured by Professor May is one of three nurseries operated by the Commission.



Many Christmas tree farms around the state have a customer choose-and-cut operation, while some of the larger farms are in the wholesale business. Modern equipment is used to trim, cut and bundle trees for transport to the market.

GEORGIA'S CHRISTMAS TREE GROWERS LOOK BACK ON YEAR OF INTENSE LABOR AS TREES ARE SOLD

The hard work payed off. The long days on the tree farm are over, and another Christmas tree season has drawn to a close. There will be no more spraying, weeding, or shaping for this holiday season. The trees are sold, and the growers are thinking of next year. So how'd they do?

Despite some of the inroads that artificial trees have made into the market, over 38 million people in America favor the natural beauty and aroma of a freshly cut Christmas tree for decorating their homes. This makes the tree business a large part of the country's agribusiness.

With 500 growers in this state producing nearly 600,000 trees a year, chances are the Christmas tree in the Georgia home is from Georgia.

Georgia's Christmas tree industry has been flourishing recently with a larger number of growers and a much wider variety of trees from which to choose than ever before. And why such success in a narrow market with many out-of-state competitors?

"Freshness and quality," said Bucky Buchanan, president of the Georgia Christmas Tree Association. "Obviously a tree coming in from Michigan or Canada on the back of an open truck is not going to look as fresh as a tree cut at one of Georgia's tree farms.

"Plus the quality is exceptional. Georgia trees are treated more 'horticulturally' than in other places. They are treated as a specialty crop, like peaches, and the premium tree is strived for. Most Canadian

trees are grown wild, with fewer management techniques involved. By using the proper management techniques, Georgia is able to produce an outstanding tree."

Besides his duties as president of the GCTA, Buchanan tends to his own farm in Grantville, the largest Christmas tree farm in the state. He has 320 acres in the rolling hills of West Georgia and 320,000 trees of several different varieties. He will produce 25,000 trees this year alone.

His largest stand is in Virginia pine, but he also has white pine, and a relatively new tree to these parts, the Leyland cypress.

The bulk of Buchanan's business is wholesale, mainly to nurseries. But like 70 percent of Georgia's tree farmers, he has a choose-and-cut operation. "My favorite time is the choose-and-cut season. My

wholesale work is usually done by them, and I can sit back and relax and watch the kids have a great time cutting their own Christmas tree," said Buchanan.

Not all farmers operate on as grand a scale as Buchanan, with automatic trimmers and seven full-time employees. Most Christmas tree farmers work on a part-time basis as a hobby to help supplement their incomes.

Howell Ball is a postal worker from Carrollton. He and his wife work their 1,000-tree farm on a part-time basis. Ball enjoys working with his trees, but says that it involves much more work than people realize. "If I added up all the time we spend on the trees, we would be making minimum wages," offered Ball.

He sells 700 trees a season -- "all I can grow," he boasted -- with some carryover for the next season. His biggest stand is in Virginia pine, but he has white pine and some cedar.

Ralph Bedley and his wife moved to Georgia from New Hampshire eight years ago. They bought a 60 acre farm near Griffin, and on advice from the nearby Georgia Experiment Station, they planted 25 acres in Christmas trees.

"Mostly firs are grown in New Hampshire," said Mrs. Bedley, "so all of these Virginia pines are quite a change for us."

Another part-time grower is Chuck Leavell in Twiggs County. Leavell has 15 acres with a total of 6,000 trees. His other job is somewhat more glamorous: he is a rock musician. Leavell was the keyboardist for Macon's Allman Brothers Band and has done recent work with The Fabulous Thunderbirds and Dave Edmunds.

He agrees with the other growers that "Christmas tree farming is very labor intensive, especially if you're a small farmer with another job. It's a big investment of both time and money."

Somewhere between Buchanan's Christmas Tree Plantation and Ball's Tree Farm falls the majority of Georgia Christmas tree growers. Most farms average a little over five acres and most are geared to the local choose-and-cut operation.

But the proximity of many growers to each other in an area, coupled with competition from nurseries, grocery stores, and farmer's markets, has brought about an age-old business dilemma for the choose-and-cut farmer: How do I get the customer to choose my tree over my competitors'?

The answer, in part, is marketing. Most choose-and-cut growers, as well as wholesalers, have begun to practice shrewd marketing techniques in order to gain an expanded share of the market.

"Since Christmas tree sales are seasonal, it is difficult to keep interest in trees going during the off season," said Paschal Brewer of Midway. "So I advertise year-round in an attempt to keep my name in the

consumer's mind all year long so when the season comes around they will know that I'm here for them." One way he advertises is by displaying some of his decorated trees at the fairs and festivals around Liberty County.

"I also leave my brochures in the rest stops on I-95 to catch those who may be heading to see relatives in Florida for Christmas," said Brewer. He expects to sell 3,000 trees this year.

Wholesaler Tom Scissom of Blairsville agrees that a specialized marketing plan is the key to success in the business.

When asked if he had a Virginia pine stand, he said he found it more profitable to grow other species. "Everybody in the whole state grows Virginia pine," he added. "The market is full."

Scissom now grows white pine, several spruce species, and what he considers "the Rolls-Royce of Christmas trees," the fir, both Boston and Fraser. He says that people come from as far away as Chattanooga and Columbus to choose from among his 35 acres of trees at Mountain Valley Tree Farm.

He believes that for the wholesaler to succeed he must break into the large Southern metropolitan markets: Chattanooga, Atlanta, Charleston, Tampa, and even New Orleans. "The potential for customers in these large areas is huge, and through efforts of the Georgia Christmas Tree Association I believe all Georgia growers can work together to compete in these markets," said Scissom.

The future of the Georgia Christmas tree industry seems to be healthy. "There were some worries during the summer drought that future production figures would be lower," said Buchanan, "but there was no considerable tree loss in the state."

The GCTA president also says the state's tree growers are fortunate to have the Georgia Forestry Commission and the University of Georgia Extension Service helping to control disease problems in the trees. He pointed out that research is also being done by the University to produce genetically-superior trees.

According to a GCTA survey, Georgia is a million tree market. With current state production at nearly 600,000 trees, there is room for more Georgia-grown trees. Hopefully, by conquering the Georgia market, it will be possible for state growers to move into the large out-of-state markets and increase the healthy growth of Georgia's Christmas tree industry.

It is doubtful that the artificial tree will ever take the place of the freshly cut Christmas tree. Too many people cherish the childhood memories of wandering through the trees to decide which one is best. Christmas tree cutting is a family tradition that will live on for generations to come, which is good news for Georgia's Christmas tree farmers.

Georgians are urged each holiday season by the Georgia Christmas Tree Association to bring Southern tradition back home by buying a fresh tree grown here in the state. Georgia-grown Christmas trees are available at retail markets and choose-and-cut farms across the state.

VIRGINIA PINE

An old favorite, characterized by its forest green color and slender, stiff needles. This pine can be cut as early as Thanksgiving and will retain its needles throughout the holiday season. Found in all areas of the state.



WHITE PINE



A lovely tree, lighter in color than the Virginia Pine. The flexible needles of the White Pine are from 2" to 5" long. Grown predominantly in north Georgia.

RED CEDAR

Famous for its fragrance, this classic Georgia tree will have your whole house smelling like Christmas. Found naturally through the woodlands of Georgia



SAND PINE

Similar to the Virginia Pine, the Sand Pine has soft, green needles. Found in south Georgia.



LEYLAND/ARIZONA CYPRESS

These fragrant trees are very similar in appearance to the Red Cedar and are gaining in popularity. They are found throughout the state.



Several varieties of Firs and Spruces are also grown in north Georgia.

GEORGIA LOG HOME COMPANY SEEKING GREATER SHARE OF JAPANESE MARKET



WILKES COUNTY MANUFACTURER'S BUILDINGS NOW IN 20 STATES AND THE ORIENT

By Howard Bennett

Alex Boatwright stood in 16 inches of snow on a mountain top some 65 miles north of Tokyo one day last month to observe workmen erecting a building from logs processed by his company back in Rayle, Georgia.

It was not the first log building the Georgian has sold in Japan, but it was the most unique. It was a log restaurant for a popular ski resort in the high altitude of Nikko National Forest.

The enterprising Boatwright, owner and president of AAA Log Homes, Inc., inherited a sawmill from his father and gradually converted it into a plant to produce pre-cut and packaged log home kits that are now sold in 20 states. Although he is appreciative of his domestic customers, in recent years he has accepted the challenge of reaching across the Pacific to strengthen his export business.

He spent nine days in Japan to check on the restaurant construction, study the log home market in that country, "and just to have a vacation." He found that more than 5,000 log homes already exist in Japan and most are of imported materials.

Boatwright said he saw some "large, beautiful trees in Japan and they would make great logs," but they were mainly in gardens, parks, and on ceremonial grounds. He said there seems to be an abundance of trees on private lands in the mountainous regions, but they are of a species that doesn't grow large enough to make a standard sized log.

The manufacturer said he appreciates the help he received from John Wells, a professional forester with the Commission who is now serving under contract with the Georgia Department of Industry and Trade as a trade specialist. Wells helped make the contact for Boatwright's recent sale.

Wells said he was aware of log home companies on the West Coast enjoying brisk sales to Japan and advised Chuck Shimomura of the Atlanta offices of Marubeni American, a large trading company that owns the resort, that several Georgia companies are also producing quality log homes and are eager to export their product.

Wells said the representative and his company later became interested in a log structure for the resort and having seen one of Boatwright's log homes that had been erected in Japan, officials chose to come to the United States and visit the plant in rural Wilkes County and tour several homes the company had sold around the state.

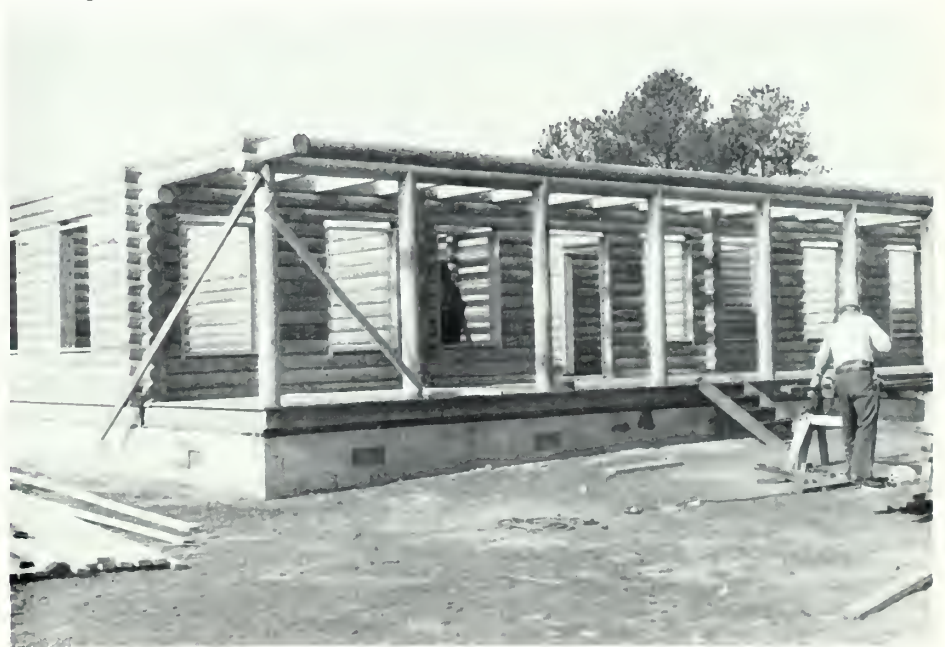
The Japanese businessmen gave Boatwright a rough idea of what they wanted for their spa and after designing and altering plans several times to satisfy the buyers, the company assembled the logs, lumber, hardware, and other materials for shipment to Japan. The logs were packed in six 40-foot containers and shipped by rail to the West Coast, where they were soon bound by ship to Japan.

When Boatwright visited the construction site in November, however, he learned that many of the pre-cut pieces had to be slightly shortened to make the building smaller than the planned 1,650 square feet. The owners elected to shrink the dimensions to avoid an extremely high tax the government imposes on larger buildings.

Boatwright also ran into another peculiarity. He found that the Japanese way of installing a subfloor was much different than the plan he had sent. The local carpenters spent considerable time in dovetailing cross pieces between the floor joints before the subflooring was put down. Although this ancient practice of interlocking timbers was employed, modern carpentry methods and power tools were used in other phases of construction.

Boatwright said the restaurant, built to overlook steep ski slopes, was designed to withstand earthquakes. He said the Japanese are very strict in their building codes and plans had to be reviewed by a local architect before construction could get underway.

With automobiles, cameras, and electronic gear from Japan flooding the United States, Boatwright and his nine employees in little Rayle are doing their part to help turn the tide. The company president is taking an optimistic approach to building a strong market in Japan, now that he knows firsthand that the log home has become very popular in the Land of the Rising Sun.



One of the company's log buildings being erected near Macon.



Helicopter mechanic Al Newman inspects aircraft during routine maintenance.

COMMISSION'S AIR DIVISION PROVIDES VITAL LINK IN FOREST FIRE SUPPRESSION

By R. Jason Anthoine

Araging forest wildfire, when observed on the ground, often seems uncontrollable. However, when viewed from several hundred feet in the air, it is a rapidly spreading menace that can be contained through careful firefighter coordination.

The firefighter operating the crawler tractor on the ground has limited vision as he plows into the dense smoke, but the pilot high above the inferno observes the behavior of the fire and instructs the operator on maneuvers necessary to contain it.

It is during these times of heavy fires that the Commission's Air Operations, part of the Forest Protection Department, are most visible. What isn't so readily noticed is the hard work that goes on everyday in keeping the planes and helicopters flying and keeping our forests free of wildfire.

According to Brad Turner, supervisor of air operations, keeping the aircraft mechanically sound is an ongoing process. "We have both planes and helicopters and they all require scheduled maintenance at different intervals."

All of the scheduled maintenance

(except engine rebuilding) is completed by the Forestry Commission in Macon. The maintenance hangar for the planes is at Herbert Smart Airport, adjacent to the Commission headquarters. The helicopter maintenance hangar is on the Commission grounds, where all the helicopters are kept.

EVERY INCH INSPECTED

Chief aircraft mechanic Vernon Crouch has been with the Commission for 30 years. "When I got here, there was no aircraft maintenance program. I put the planes on a 100-hour maintenance schedule and an annual checkup. That is even more important now, since a plane that used to cost \$17,000 now costs around \$100,000.

"I was the only mechanic for a long time. Now we have the best maintenance in the Southeast and the FAA says that we have the best kept fleet of planes in the country. I don't expect anything less than that."

According to Crouch, the mechanics go over every inch of the aircraft before it is released to the district. "A mechanic thinks

about every little detail of that aircraft before he goes to sleep at night, making sure that everything was done right. It's his name on that check-out sheet and he will have to live with himself if something goes wrong."

The reason all of the scheduled maintenance is done in Macon is to assure safety, said Crouch. He doesn't want the pilots to be worried about the mechanical condition of the aircraft when he should be concerned with flying.

The planes in operation are all Cessna 180s, 182s, or 185s. Each district is assigned a plane and a pilot. Additional pilots are hired for seasonal work during the busy fire season. The pilot's main job is to fly over the district and search for fires. If smoke is spotted, then the pilot must locate it and determine if the fire is wild or not.

During actual fire fighting, the pilots assist the ground crews in battling the blaze and maneuvering safely. From the air, it is easier to decide which way to direct the plows to head off the fire because smoke and intense heat do not interfere with the pilot's vision. But that doesn't mean that the job of aerial surveying is easy.

SURVEY TIME CONSUMING

"Sometimes the days are long and hard for the pilots, especially during the fire season. Many hours are spent surveying the land for fires and helping to direct the ground crews. It is easy to get fatigued," said Crouch.

The helicopters, on the other hand, are actively involved in actual fire suppression. In areas where the terrain is too rough for the tractors or the fire is too intense for the ground crews to move in close, the helicopters are used to drop water on the fire.

Helicopter pilot Carlos Layson said that the most difficult part of dropping the water is dipping the bucket. "It is very important for us not to get the cables of the bucket tangled on

Brad Turner, supervisor of air operations, listed the following as pilots for the Commission's 12 districts:

Curtis Dowis, Jimmy Vaughn, Jim Lanning, Wayne Womack, Stephen Brooks, Joe Warren, Charles Prince, Bo Harden, Titus Baxter, Kenneth Hanson, Thurmond McDonald, Vance McLaughlin, and Addis Baxter.

The helicopter pilots are Carlos Layson and Brad Turner.

Mechanics include Vernon Crouch, Donnie McCay, Jack Davidson, Ray Bryant, and Al Newman.

the skids of the helicopter. This could cause the aircraft to tilt and hit the water. We ar

very careful of that."

Helicopter mechanic Al Newman is the one assigned to fly with Layson to assist in water dipping and dropping. "Dumping that water is a two-man job," said Layson. "It wouldn't be efficient for me to fly and dump the water. There's just too much to look out for."

And efficiency is the name of the game when you're fighting fire from the air. A two-minute turn-around time between drops is most effective. To reach this end, the water is dipped from any available source including lakes, rivers, or private ponds. "Usually the landowner is very cooperative in letting us dip from his pond. Maybe it's because the fire could easily threaten his property," added Newman.

When not dropping water, Newman is charged with keeping the Commission's three Vietnam-era Bell helicopters in top working order. He performs 25-hour inspections and a more thorough 100-hour inspection. "The helicopters are not used for surveillance because the operating costs are prohibitive. Planes cost \$30-\$40 per hour to fly while helicopters

**THIS SYSTEM OF
GROUND CREW
WORK ASSISTED
BY AIR
SURVEILLANCE
HAS BEEN AN
UNQUALIFIED
SUCCESS.**

are more in the range of \$300-\$400 per hour," said Newman.

The helicopter hangar is being expanded in order to house all of the operational helicopters. "The elements are tough on them. There are so many moving parts and

dirt and sand can cause serious damage right quick," said Layson.

The aircraft operations are a perfect complement to the ground crews. A prime example of this cooperation occurred last fire season. Some ground crewman were working a fire near Cartersville when, unknown to them, they were surrounded by fire. Fixed-wing pilot Curtis Dowis spotted the two patrolmen, Bobby Smith and Jimmy Crawford, and warned them to make a run for it and put on their portable fire shelters. Dowis then directed helicopter pilot Brad Turner to drop water on the men and their equipment. Forester David Nicholson, operating the bucket, said he was hindered by dense smoke, but he "hit the target" and the patrolmen were saved.

This system of ground crew work assisted by air surveillance has been an unqualified success. Especially during the heavy fire season, there are quite a few landowners who breathe heavy sighs of relief because of the hard work done to combat the fires. It's good to know that the Air Operations are there to help. ♣



The Commission's chief aircraft mechanic Vernon Crouch is assisted by Jack Davidson in inspecting the engine of a Cessna at the Macon hangar.



The national headquarters of Chick-fil-A exemplifies metro Atlanta's commitment to conserve trees when construction is planned. The wooded trails on the grounds often attract school children and other visitors on field trips.

METRO ATLANTA COUNTIES' LANDSCAPING ORDINANCES ADHERED TO IN EFFORT TO PRESERVE URBAN TREES

BY PAIGE HAYS

Early reading books depict cities as concrete and steel jungles with airplanes, eighteen wheelers and traffic cops whirling about their pages. For many people, that image of city life lingers long after they graduate from the adventures of Dick and Jane. Not so for children growing up in Atlanta.

As you drive along the streets of the South's largest metropolis you are surrounded by trees. Some of the city's prettiest oaklined streets are only minutes from the heart of downtown. Further out, near the perimeter, office complexes and shiny new subdivisions are obscured by the forest. How did these venerable shade trees and dogwoods ever compete with construction during Atlanta's growth spurt of the '70s?

Atlanta's commitment to its urban forest was solidified in the City of Atlanta tree ordinance. Yet, few of the nearly one million people who have flocked to the city since 1977 actually live within its limits. Much of this decade's growth has occurred on the outer edge of the perimeter. Since 1985, three metro-Atlanta counties have established tree ordinances. Fulton, Gwinnett, and Cobb counties all have guidelines for maintaining and protecting their trees.

Fulton county was the first to establish an ordinance and the first to back up those requirements with a full-time arborist. Ed Macie was hired in 1985 to enforce the new ordinance and he works with developers in Alpharetta and Roswell, as well as in Atlanta. Every application for a land development permit in the county must be accompanied by a formal tree protection plan and Macie reviews the plan and then inspects the site.

Fulton county's tree ordinance requires a minimum of 15 tree units per acre. These units can be earned by a variety of combinations. Some sites meet the requirement with one large specimen tree while others end up needing 30 trees two inches in diameter. Basically, the requirement is tailored to guarantee a minimum of 15 square feet of basal area per acre.

Macie says that on the average developers exceed Fulton's requirements by 40 percent and that flexibility and willingness to work with the developers is the key to the success of the

ordinance. "Fifteen units is the fundamental tree density formula. We'll work with the developer and the site limitations to produce the most viable tree environment possible," Macie explained.

His main responsibilities as county arborist are site inspections and evaluation of site plans. Macie is out in the field three days a week inspecting construction sites. He also has the authority to issue a court citation for violations of the ordinance, but has rarely exercised that privilege. "There is a strong understanding among developers that what they are doing is a good thing," said Macie, "They think it is important for the kids."

ATTRACTING FOREIGN INTEREST

Fulton combines an educational approach with the administration of its program. Right after the ordinance was passed, 250 developers and engineers attended the first informational seminar. Because of these efforts, most of Atlanta's building community is well aware of Fulton County's tree ordinance. Other people are learning about it too, as inquiries have come from as far away as Canada, Great Britain and South Korea.

Macie says he has witnessed an urban forestry renaissance in the Southeast. He thinks the public is increasingly attuned to their surroundings. "Atlantans are becoming scared they've taken their resources for granted, but we aren't discouraging development....We are trying to integrate a growing city into a more natural environment," he concluded.

Two corporate real estate developments in Fulton are prime examples of this concept of dual existence between nature and urban growth. The Chick-fil-A and Life of Georgia headquarters both symbolize the goals of arborists around the city.

Truett Cathy is a well-known Georgia success. Macie hopes the new Chick-fil-A headquarters in south Atlanta will become another example for people to follow. The 73-acre development near Hartsfield International Airport was built for tree lovers, literally. Cathy requested his architects and the construction team to save every tree possible. As you drive through the colorful patchwork of fall leaves, you know they followed their directive.

Cathy wanted to motivate his employees by creating an environment that would entice them and make them enjoy coming to work. His first step was to hire Landscape Architect Roy Ashley to work closely with architects Smallwood, Reynolds, Stewart and Associates, Inc. They and the principle contractor, Hardin International, formed the tree preservation team. Tree save guidelines were established by Ashley and closely adhered to by all.

'TREE SAVE' BANNERS EVERYWHERE

Nolan Robinson, senior director of administration for Chick-fil-A, closely supervised the construction process. He says everyone went all out to comply with Cathy's requests. "The road looked like a Christmas parade. Everything was plastered with red 'tree save' banners. It made construction very difficult for those guys and sometimes they couldn't even get close to the building for the trees." Somehow they managed. The building has won prestigious awards for its precast concrete construction, architectural design and land development. And, amazingly, few trees died in the process.

In fact, Robinson said the mandate to save all trees resulted in the breaking of an old custom for Hardin International. "It's tradition to have a topping out ceremony. They put a tree on top of the building to symbolize its completion, but they didn't do it for this project. We wouldn't let them cut a tree." (A tree was brought in from another property.)

Truett Cathy wanted an island of woods to screen the building from the parking lot. So, today his employees take a brief walk through a mixed hardwood stand on their way to work. That's part of Cathy's philosophy: good aesthetic standards generate a good attitude at work.

This dedication to excellence continues throughout the grounds. Paul Jones, the building maintenance engineer, is responsible for 3/4-mile trail of cypress mulch that leads through the woods and encircles a pond inhabited by geese and swans. Dr. James Skeen of the Fernbank Science Center has labeled and identified trees along these paths by their common and scientific names and all species are native to Georgia if not the grounds. The trails attract many teachers and children who tour Chick-fil-A to learn about nature.

The woods and grounds they tour are always lush and green, even during summer drought. This is because the entire property is irrigated by the pond, which can cause some confusion. Robinson explains: "We had county agents come twice this summer to investigate our water source. They couldn't believe our landscaping looked so good, it just made them suspicious."

Visitors often tour the award winning building also. Chick-fil-A was awarded the Fulton County Award for Architectural Design and Land Development in 1985. The five-story building was remodeled so that Cathy's executive suite would be at eye level with the tree tops. He tells visitors that he always wanted to have an office like a tree house and now he's built one!

On the northern end of Fulton county, another office complex resides in a maze of interstate, road construction and office buildings, but you cannot even see the Life of Georgia building for the trees.

As the oldest life insurance company in the state, Life of Georgia has learned to respect man's dependence upon nature and his need to preserve it. When the company decided to move their headquarters from downtown Atlanta, their first priority was to relocate in a scenic setting. They needed a large tract of



As many trees and shrubs as possible were saved to preserve the scenic beauty of the area when Life of Georgia established its new headquarters in Northern Fulton County.

undeveloped land to create an environment conducive to corporate expansion in natural surroundings.

The property they selected was an 108-acre tract of woodlands adjacent to a residential neighborhood. Their first attempts to rezone that land for commercial use did not win popular support. In order to generate good will in the community, Life of Georgia designated 40 acres for a residential development, donated eight acres to a local church, set aside 17 acres as undisturbed buffer, and agreed to widen Powers Ferry road at their own expense. As it became evident that the company intended to preserve the natural beauty of the land they had acquired and to respect the needs of the community, the residents began to accept the project. It was time for construction to begin.

CAMPUS SETTING AMONG TREES

Life of Georgia wanted to create a campus like setting among the trees. Ken Henderson, real estate officer, said, "our main objective was to keep trees as close to the parking lot and the buildings as possible." They hired Franzman-Davis & Associates, Ltd. He worked closely with the architectural firm of Thompson, Ventulett, Stainback and Associates to design a two building complex that would complement and blend in with the environment.

The firm embarked on an extensive tree-save program that was incorporated into all phases of the development. Requirements for tree save fencing and a \$500 fine for every tree lost from a tree save area were written into the builder's contract. Two miles of tree save fencing were built on the site, and not one tree was lost. "We didn't even have to levy the first fine," Ken Henderson proudly stated.

The site is very hilly with many knolls and valleys. Life of Georgia spent millions of dollars building 17 retaining walls rather than level and fill those areas. "We built huge retaining walls that enabled us to keep the ridges with the original woods intact," Henderson explained, "The walls minimize the disturbance to the woods. It was well worth the investment."

The largest retaining wall is 400 feet long and 35 feet high. At its base the wall extends 12 feet back into the earth for support. The west parking lot built upon the foundation of this wall is surrounded by trees. Less than 100 feet away, cars whip around Powers Ferry road, but you cannot even see the whirlwind of traffic. If the naturally steep grade from the parking area to the street had been leveled, it would have eaten away at this natural wooded barrier to the hectic city beyond.

The massive walls do not stand in stark contrast to the beauty around them. They are made of hand laid rubble stone and are designed to blend in with the setting. The steep grades the walls maintain create quite a water run off after a heavy rain, but they planned for that, too. Spillways of rubble lead the water to rougher rock which slows down the flow and prevents erosion.

STUDIOUS ATTENTION TO DETAIL

A storm water lift station was installed to prevent filling one valley and subsequently killing a cluster of trees. Water runs off the area into a manhole and is then pumped to another location on the property. A costly venture for the company, but now they have a beautiful cluster of trees nestled into a valley of rock croppings within 50 feet of the building.

This commitment to proper tree care has continued since the building was completed in 1985. Gibbs Landscape Company cares for the grounds with studious attention to detail. On a recent tour of the property with Henderson they discussed everything from a patch of stubborn grass to complex irrigation for a steep incline on the site. Gibbs has tagged and identified trees on the site and keeps a history of their health and growth. The trees are checked regularly and injected with fertilizer and chemical treatments if necessary. One tree on the property received surgical treatment after suffering from storm damage.

Henderson was on site for every day of construction and closely supervised the tree save program. His pride in the results of that program are evident. Trees encircle the complex on all sides but the entrances, and some trees are as close as ten feet to the building. Bringing in the heavy equipment needed to hang the panels of precast concrete near the tree save areas was difficult. A tight construction schedule resulted to limit the number of vehicles on the property at any given time. This minimized the disturbance of the site, and slowed construction considerably. It took 22 months to complete the two buildings on the complex, but was worth the wait. They have received the Georgia Association of American Institute of Architects Award for excellence in Architecture 1985.

The employees seem to enjoy their surroundings. "This facility is much more serene that it was downtown," Henderson explained. "Here some of our workers jog around the building." Leon Hames, Senior Vice President, echoed Henderson's observation, "We wanted to make our employees proud of this project, and they are. They care about the grounds...I've even seen them picking up trash in the parking lot."

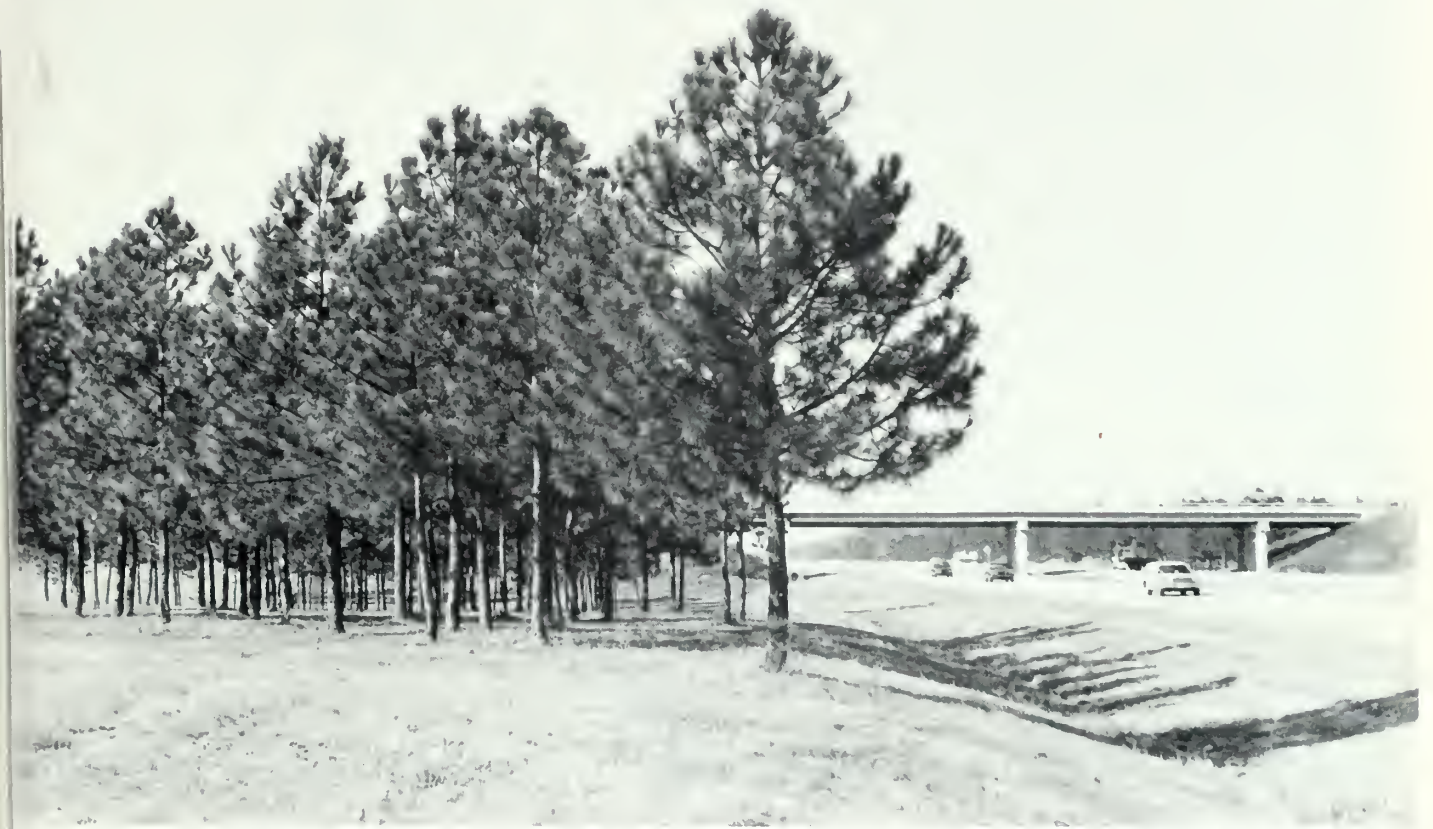
Indeed it does seem that the entire center is involved. Each of the elegant conference rooms is named after trees native to the South. This love of nature has been extended to wildlife also. A dozen bluebird nests have been scattered around the grounds, and each year they obtain full occupancy. Hames said, "We wanted it to look and feel like a park." It looks so much like a park they often get unexpected visitors. One day a Japanese tour bus drove up the tree lined entrance and unloaded at the complex.

CONCEPT IS CATCHING ON

The success of these two tree save projects is directly related to four key factors: the commitment originated with the top management, tree save areas were included in initial planning stages, tree save barriers were erected during construction, and post construction maintenance followed.

The deep commitment to enhancing the natural beauty of the land and the work environment shown by these two projects is not always in evidence, but the concept is catching on. Macie attributes this arborist zeal to the new idea of corporate responsibility. Maybe it's also a sense of confidence in the permanence of the business involved. Ken Henderson illustrates this assurance in his company's future, "The difference between our building and a leasing development is that we view this as our home. We'll be here for years to come." Thanks to the care they have taken since this project's inception, so will the native Georgia trees that surround them.





Tree species are carefully selected for their durability to withstand drought and emissions from vehicles.

DOT LANDSCAPING AND ROADSIDE DEVELOPMENT PROGRAM PLANTS TREES ALONG HIGHWAYS FOR BEAUTY AND SAFETY

There's only one chance to make a first impression, and Georgia Department of Transportation Maintenance Engineer Don Watson tries to make certain that the first impression visitors have upon entering the state is a good one. With the help of trees, he's succeeding.

Watson is in charge of the DOT Landscaping and Roadside Development Program that began several years ago. As part of the highway beautification effort, the Department's two landscape architects and seven roadside enhancement coordinators draw up landscape plans for DOT rights-of-way. Trees are planted on those rights-of-way which are bare or have been cleared for construction.

Watson said the program has accelerated in recent years, with particular emphasis being placed on the entrances into the state. "When people enter the state, the first thing they see is a vast stretch of interstate," he said. "We try to make our highways more attractive by planting trees."

The engineer said that the DOT doesn't reconstruct roadside areas but plants trees which will enhance the natural growth of the site. Occasionally, evergreens are

planted to add color to the roadside during the winter months.

The trees the Department plants must be compatible with their environment. "Our trees are judged for their durability against drought, heat, and emissions from automobiles, as well as for their looks," Watson said.

Tree species used by the Department include oak, pine, poplar and sycamore, and to a lesser extent, maples and magnolias. Watson said the trees are purchased on a low-bid basis from several North Georgia nurseries, as well as from Georgia Forestry Commission nurseries. Many garden clubs throughout the state are now co-sponsoring the program.

Watson said that, in addition to making Georgia's highways more beautiful, the trees serve another purpose -- that of making the highways safer.

"When you're travelling on the interstate, mile after mile of the same scenery becomes hypnotic, and therefore dangerous," the engineer said. "We try to break up the line of sight to help drivers stay alert and reduce the number of accidents on our roads."



Willie B., a popular Zoo Atlanta resident, roams through the simulated African Rain Forest, a major addition to the park.

ZOO ATLANTA'S \$4.5 MILLION TROPICAL RAIN FOREST ENHANCED BY 20 SPECIES OF NATIVE GEORGIA TREES

By Bill Edwards

Zoo Atlanta's new \$4.5 million simulated African Rain Forest includes 20 species of trees native to Georgia and offers the possibility of observing the zoo's most famous resident, 459-pound gorilla Willy B., lounging under a Southern magnolia.

The new Ford African Rain Forest (major funding by Ford Motor Company) is one of many renovations expected to make Zoo Atlanta a world-class zoological park. The renovation program marks a positive reversal of the zoo's image following a highly publicized 1984 scandal involving zoo conditions. A large percentage of the zoo's staff were replaced after the negative publicity.

Don Jackson, Zoo Atlanta's curator of horticulture, who was recruited from the Cincinnati Zoo and Botanical Gardens following the scandal, said "We have new people, new attitudes and progressive concepts now - and the new rain forest is a major phase of this progress."

Jackson said native Georgia trees used in the rain forest - especially species of magnolia - have characteristics of tropical trees; leaf traits include large size, drip-tips, and a smooth-waxy surface.

Since most of the animals will be displayed in outdoor settings, Zoo Atlanta will have an impressive botanical display - as well as an international variety of birds and animals. Native Georgia trees have an important role in simulating this natural habitat environment.

The objective is to stimulate natural habitats of the animals as nearly as possible. Natural habitat encourages characteristic

animal and bird behavior, which is important to the research program now an integral part of Zoo Atlanta. Animals interact with nature and each other the same way they would in the wild, while visitors observe them at close proximity without the distorting influence of cages and bars.

In addition to Willy B., a number of other Silverback gorillas will inhabit the rain forest. With anticipated gorilla births during the first year, Zoo Atlanta's rain forest is expected to have one of the largest gorilla populations in North America. The rain forest area will also be the home of a variety of tropical birds with species ranging from the orange-cheeked waxbill to the double-toothed barbet.

Simulating a natural forest environment for a variety of exotic wildlife requires careful selection of tree species and various other plants. In addition to native Georgia trees, Jackson said numerous other trees and plants typically associated with Georgia were also used in the rain forest. Approximately 1100 trees, 1800 ferns and 680 shrubs were planted. Some 1200 elephant ears and an equal number of cannas were also placed in the forest; while more than 6,000 bulbous plants and a multitude of vines were added for an authentic touch to make the residents feel at home.

Jackson, a University of Kentucky graduate with a B.S. in horticulture, also completed phases of graduate study in education at the University of Cincinnati. He emphasizes that graduate work in education - although the general public does not generally relate it to zoo operations - is actually essential.

"Operating a modern zoo is no longer a matter of just putting

animals in cages and selling tickets for people to look at them," Jackson said. "The modern zoo is a compatible blend of recreation, research, conservation and education - a social and environmental benefit to the times we live in."

Jackson cites the new rain forest as an example of this concept - with obvious concentration on education. He points out that excessive cutting of rain forests with virtually no restrictions or efforts toward regeneration is creating serious problems; negative results vary from making certain species of plants extinct to increasing fears that the world's weather patterns are being disturbed by the mindless destruction.

"Species of rain forest trees and plants that have never been researched are vanishing into extinction," Jackson said. "One of these plants could offer a cure for cancer, or serve some other beneficial purpose. We just don't know without research."

Jackson said there is a need to make the public aware of such situations. He points out that - contrary to popular opinion - rain forests are not areas that regenerate quickly. Shallow top soil and excessive erosion make natural regeneration a losing proposition. Unlike Georgia's pine forests that are regenerated and harvested within 30 years under intensive forestry management, the intricate requirements for regeneration of a clearcut rain forest are much more complicated.

As an example of such destructive logging practices, Zoo Atlanta's rain forest includes the large, sawed logs of a tulip poplar (a native Georgia tree). Complementing the authenticity are corn and other crops planted in the logged areas; native farmers living in the rain forest often practice this form of agriculture. Even dead trees (including Georgia oaks) have been set as "climbers" to enhance the realistic atmosphere in some areas. Orangutans, especially, enjoy climbing these dead oaks.

Although the Ford African Rain Forest was a massive project, meticulous care was taken in selecting the right size and species of trees and other plants. Many trees, including native Georgia trees, had to be transported long distances and set by crane.

Jackson emphasizes that the care and knowledge exercised in establishing the rain forest will be practiced in establishing other scheduled natural habitat projects. Future projects in Zoo Atlanta's agenda include an Arctic Coast and an African Savanna.

Zoo records show the attraction of the Ford African Rain Forest and other completed projects have already increased attendance at the zoo from 279,000 in 1984 to 618,000 in 1988 (August).

"Judging from the positive reactions we've experienced so far," Jackson said, "I don't think it would be unreasonable to believe Zoo Atlanta will be one of the finest zoological parks in the United States." ▲



Workers erecting dead trees, including Georgia oak, to provide authenticity to the rain forest and to point out the destructive logging practices in the African region. The trees also provide climbers for some of the zoo's primates.

Tour Educational For Guide!



FORESTER HAS GREATER APPRECIATION OF FREEDOM TO MANAGE GEORGIA WOODLANDS AFTER LEARNING OF EUROPEAN RESTRICTIONS

Tours can be as educational for the guide as the tourist, according to Lane Garland, forester, Barrow-Jackson Forestry Unit.

Garland was recently performing his usual duties when he was called on by the University of Georgia School of Forest Resources to act as a tour guide for an Austrian forestry professor visiting UGA. The visitor was Max Krott, professor of forest policy for the University of Vienna. Enroute to Tennessee on a rushed schedule, the Austrian was visiting the U.S. for observation of various forestry practices.

Since Garland was near UGA and considered a highly capable forester, he was contacted by the university to take the Austrian professor on a four-hour whirlwind tour covering several area counties.

"He didn't speak English very well," Garland said, "and my German is confined to less than a dozen words, but we communicated enough to make it an educational experience for both of us."

The first thing the visiting professor wanted to see was "a clearcut." He told Garland that he wanted to see such an area because there was no such thing in Austria, where clearcutting is prohibited by law. Garland said Krott was impressed by the clearcut and Georgia's vast, well-managed timber tracts that make such practices feasible. He pointed out to Garland that Austria (smaller than Georgia), like many areas of Europe, is a relatively small area with a heavy concentration of people and a resulting preoccupation with preserving trees.

The trend is nothing new in Europe, even Hitler managed to work in some restrictive forestry practices for Germany with his plan to conquer the world. Although Garland was aware of the general atmosphere of European forestry, he said it was another thing to personally witness the response of an European forester to Georgia's forestry practices.

"He was really impressed with our 30 to 40 year rotation plan for pines," Garland

said of Krott, "as opposed to Austria's 60 to 80 year rotation plan for timber."

As the tour continued, Garland said Professor Krott was also favorably influenced with planting, harvesting and several CRP tracts. The Austrian showed particular interest in one-to-three-year-old pine stands and their management.

The professor also visited a controlled burn area. He told Garland that forest fires of any kind are virtually non-existent in Austria because permission to burn is virtually non-existent. Krott said that in his country, if a landowner (or anyone else) is responsible for a fire that goes out of control and burns woodlands, houses or whatever that person is liable for all damages caused by the fire.

As the tour progressed through the woodlands of Oconee County, Garland and the Austrian gradually overcame the language barrier and Garland learned that Austrian legal concern is not only for live

tion and instructs the landowner as to whether or not he has permission to cut the tree down.

"Over there," Garland noted, "the general situation seems to be that foresters are not asked for advice on what to do, they're asked for permission."

When they reached a large scale logging operation on the tour, Garland described the Austrian's reaction as "amazed" at the size, efficiency and versatility of our logging equipment. Krott explained to Garland that Austrian logging operations are usually confined to the strained efforts of a farm tractor. The Austrian landowner (after receiving permission to cut his timber) cranks up the farm tractor and proceeds. Then he is confronted with another contrast to U. S. Forestry. In Austria there is no middleman (logger) in the buying/selling process. After the landowner has the timber cut, he must drag the logs to a convenient roadside area so a mill can pick it up.

The final source of amazement to Professor Krott on the tour came when they happened to drive through a residential section of Greene County. Krott asked Garland if these homes were "government homes" - were they built for high level government officials?

When Garland replied that the homes were a typical suburban area, Krott said it was hard to believe that middle class citizens could afford to live in such extravagant dwellings. He pointed out that in Austria the middle class lives in six-story housing complexes because it is all they can afford; only the financially elite and high-level government officials live in homes like those in the Greene County suburb.

To make the housing situation even more complicated, Krott said that if an Austrian citizen happened to be fortunate enough to own woodland property and desired to build a house in the woods, the chances are he would not receive government permission to do so. Why? Because trees would have to be cut to make room

FOREST FIRES OF ANY KIND ARE VIRTUALLY NON-EXISTENT IN AUSTRIA BECAUSE PERMISSION TO BURN IS VIRTUALLY NON-EXISTENT.

trees, but extends with complete seriousness to dead ones.

Krott said when a tree dies in Austria, the landowner just doesn't go out and cut it down to get rid of it or use it for firewood. A government forester must be contacted; the forester then schedules an examina-

for the house.

Garland completed his duties as tour guide and Professor Krott went on his way to other U. S. points of forestry interest before returning to the University of Vienna.

"I don't know about Professor Krott, but I won't forget this tour for a long time,"

Garland said. "Although you might really know it on some level, this sort of thing makes you realize how fortunate and free we are in this country to manage our forest resources. And it made me especially aware of how efficiently Georgia manages all phases of forestry. We're lucky to be here for a lot of reasons." ▲

DIAMETER LIMIT CUT CAN BE BIG MISTAKE

A prospective timber buyer approaches a landowner with the offer to buy all the landowner's pine timber over 12 inches in diameter at breast height and "give the smaller trees room to grow." In a situation of this type, landowners should be wary!

"This proposal from a prospective timber buyer can be a very expensive mistake for a landowner," said John Merrill, reforestation forester assigned to the Commission's Athens District.

Merrill warned that many of these smaller trees are just as old as the bigger trees but are of inferior genetic material that have been suppressed by the more vigorous trees.

"Even after they are given 'room to grow', they may never respond with more rapid growth," said Merrill.

He explained that after the larger trees are cut the genetically inferior pines cannot compete "with the hardwoods that spring up" and the result is often an over abundance of unwanted growth from the forest floor.

"We (the Commission) often hear from the landowner after the cutting has been done and the hardwoods are coming in so thick that the landowner wants to do something about it," said Merrill.

At this point the landowner has few alternatives. One possible solution is to cut the inferior pines, treat the hardwoods with herbicide, and replant the land with superior quality pines by hand.

Merrill advised landowners to avoid this type of situation by contacting the Commission or a licensed forestry consultant before seriously considering a diameter-limit cut. ▲



Steven Pontzer in stand of birches.

EXCHANGE STUDENT OBSERVES FINNISH FORESTS

"The winter is long and the trees must make up for it in the summer and then the growth rate is phenomenal...At the present time I can look out my window and see the silver birches turning their rusty yellow for autumn, but the Norway spruce and the Scotch pine still hold their year-round green."

That's an excerpt from a recent newsletter from Steven Pontzer of Clarke County, a University of Georgia forestry student currently serving six months in Finland in the International 4-H Youth Exchange Program.

He pointed out that pine, birch, and spruce are the tree species that make up much of the Finnish forest industry. There are some others like the trembling aspen, a tree that provides wood used for making saunas because it doesn't get hot. There are also two birch species that inhabit the wet areas and a dwarf birch that grows in Lapland above the Arctic Circle.

The Georgia student said the wet areas of Finland are constantly being improved by the use of ditches. Even in the wet areas, the Finns mark their forest boundaries with a one-meter-wide strip of land on which they have cut all the vegetation. They are also very conservation-minded.

Many species of animals inhabit the Finnish woodlands. Wolves, whitetail deer, bears, rabbits, lynx, and fur-bearing animals are all a part of the forest and many types of grouse, ducks, raptures, and song birds also call the forest home.

The moose, however, is the animal that concerns Finnish foresters most. It feeds on pine and birch tree seedlings. The small trees are eaten and the large moose walks over the older trees and bends them over to reach the tender shoots and bark and help feed the young moose.

Since the forests of Finland only renew themselves every 100 years, the forestry industry is closely governed by regional and national forestry boards. "They tell what trees can be harvested," Pontzer said, "and they check for reforestation. Most of the trees are harvested in the winter because the farmers have no crops to work in the snow and harvesting on frozen ground reduces root damage to uncut trees." ▲

MYERS ACCEPTS POSITION AT UGA FORESTRY SCHOOL

J. Walter Myers, Jr., retired executive vice president of Forest Farmers Association and immediate past president of the national Society of American Foresters, has recently been retained to assist in teaching forest resource policy at the University of Georgia's School of Forest Resources.

He will be working with Dr. Fred W. Cabbage, who is in charge of this area of instruction. Myers will collaborate with Dr. Cabbage in developing and leading class case study discussions on such subjects as forest policies in practice, impact of legislation on forestry activities, various forms of timber management, pine regeneration, and management of wetlands.

Myers resides in Atlanta, and holds bachelor's and master's degrees in forestry from Louisiana State University. ▲



67 PERCENT OF LAND IN 35-COUNTY AREA IN COMMERCIAL FORESTS

SOUTHEAST GEORGIA TIMBER SURVEYED

A large group of landowners, industrialists, foresters, and other interested persons gathered at Brewton-Parker College in Mount Vernon recently to hear a report on the principal findings of a survey on forest resources in the 35-county Southeast Georgia area. Taking part in the presentation were Senator Hugh Gillis, Commission Director John Mixon, Lamar Beasley and Noel Cost of the U. S. Forest Service, and Resource Consultant Herb Knight.

Mixon emphasized that results of the forest survey are widely used by both government and industry. Information developed during the survey is used for determining amounts of money to be spent on forestry practices, new manufacturing plants, expansion of existing plants, and in other planning and decision making.

The survey measures acreages and volumes of timber in various ownerships, types and classes of timber, volumes of growth vs. volumes removed, and changes that have occurred since the last survey.

Results of the 22-county Southwest Georgia unit were announced in June, and the 49-county Central Georgia unit will be completed in early 1989.

The 35-county Southeastern area contains 10.7 million acres total, of which 7.2 million or 67 percent is in commercial forest. Another 368 thousand acres of forest is restricted use, primarily in the Okefenokee Wilderness area. Commercial forest area has increased 30,000 acres overall, but this masks an increase in 16 counties, a decrease in 16 counties, and no change in 3 counties.

The survey showed that plantations now occupy 2.5 million acres or 35 percent of the timberland in this region. In addition, plantations contain almost a third of the softwood inventory and are now supplying a third of softwood removals.

Also shown in the survey was an increase in artificial regeneration from 75,000 acres annually during the 1971-81 period to the current average of 155,000 acres. Including both artificial and natural regeneration, 159,000 acres of new pine stands were established yearly. This exceeded the acreage of pine stands harvested by 4 percent. Nearly 60 percent of the total regeneration occurred on non-industrial private land. Loblolly pine accounted for 54 percent of new pine

INTERSTATE OBSERVES 20th ANNIVERSARY

Interstate Paper Corporation recently observed the 20th anniversary of production at its Coastal Georgia facility with a celebration by hundreds of employees and their families and a salute in the United States Senate.

This year's annual family day picnic held at the mill marked the 20th anniversary for the kraft linerboard mill at Riceboro, some 35 miles south of Savannah.

U. S. Senator Wyche Fowler (D-Ga.) congratulated Interstate Vice President and General Manager Dean D. Barger and the entire Interstate "family" on the production milestone through a telephone hookup.

Fowler, who was prevented from attending in person because of the Congressional adjournment rush, commended the company and its employees in a statement to the U. S.

planting.

The volume of hardwood growing stock increased 4 percent to 44 million cords. Tupelo and blackgum, the major hardwood species in the region, increased 3 percent to 15.5 million cords. Collectively, oak volumes were up 3 percent to 12.3 million cords. The two groups accounted for almost half of the total gain in hardwood volume.

The volume of softwood growing stock declined less than one percent to 65 million cords. Loblolly pine inventory increased 9 percent to 13.8 million cords. Volume of slash pine, still the dominant softwood species in the area, decreased one percent to 37.3 million cords. However, slash still accounts for 57 percent of the softwood volume. Longleaf pine volume fell 21 percent to 5.3 million cords, while cypress increased 7 percent to 6.5 million cords.

When the area is divided into two sub-units along the Ocmulgee-Altamaha River system, differences in ownership and management become apparent. The Southern area is 56 percent owned or leased by forest industry, compared to 28 percent in the North. Sixty-four percent of Southern area pine stands are plantations. There has been a 9 percent pine inventory increase, 119 percent of pine growth is being removed, and only 21 percent of pine plantings have been made through the Conservation Reserve Program.

In the Northern area, 45 percent of pine stands are plantations. There has been a 9 percent pine inventory decrease, 80 percent of pine growth is being removed, and 79 percent of pine plantings have been made through the Conservation Reserve.

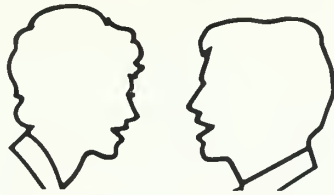
The forest statistics report for Southeast Georgia was prepared by the Southeastern Forest Experiment Station in North Carolina as part of an on-going study on the inventory and analysis of Georgia's timberlands.

Senate, citing Interstate as "a role model in effective rural development." Interstate was financed in part by a 1966 industrial development loan from the U. S. Department of Commerce's Economic Development Administration.

"The EDA loan has long since been paid off and for 20 years, Interstate has provided stable, well-paying jobs for some 300 persons spread over a 12-county area," Fowler said. "The annual payroll is currently some \$1 million," he added.

Praising the unusual stability and dedication of the Interstate workforce, Fowler said the employee turnover rate is among the lowest in the pulp and paper industry. He also noted that 29 employees are "second generation" — a son or daughter of a present or past Interstate employee.

PEOPLE



IN THE NEWS

JEFFERSON FARRIS, formerly a patrolman in the Whitfield Unit, has been named ranger of the Appling County Unit to succeed LeRoy G. Page, who recently retired.



FARRIS



PAGE

The new ranger, who came with the Commission in 1984 as a patrolman in the Crisp-Dooly Unit, is married to the former Miss Debbie Sims of Rockmart. Farris, a native of LaFayette, has earned associate degrees from Abraham Baldwin College in forestry and wildlife management...More than 60 persons gathered to honor LEROY G. PAGE at a retirement party that marked the end of his 34-year career with the Commission. A native of Wheeler County, he served as ranger of the Turner County Unit and was later transferred to the Appling County Unit. He received the Outstanding Ranger Award in 1984. The retiree and his wife, Lucy, are active in the Friendship Congregational Church...Jesup native BRANTLEY MCMANUS has been named ranger of the Turner County Unit in



MCMANUS



BROOKS

Shburn. He holds an associate degree in forestry from ABAC and formerly served as supervisor of the Clayton County Water Authority. The new ranger, who succeeds Len M. Smith, who was recently transferred to the Flint River Nursery, is married to the former Miss Patti Prescott of Folkston. They have one son, Kevin, and the family is active in the United Methodist Church...Forester TERREL BROOKS, seed orchard manager, retired recently after

erving 34 years with the Commission...BILLY BARBER, who came with the Commission in the summer of 1957 and held many responsible positions across the state during his long career, was recently honored at a retirement dinner. During his years with the Commission the forester served as ranger in Clay County, district ranger in the Camilla District, assistant district forester in Statesboro, district forester in Gainesville and McRae Districts, superintendent of the Dixon Memorial State Forest and supervisor of the Baldwin Seed Orchard. Barber and his wife, Lena, now make their home in Milledgeville...CARLOS LAYSON has been



BARBER



LAYSON

retained as a full-time helicopter pilot after flying on contract for the Commission since 1985. Layson will be working out of the Macon headquarters. He and his wife attend Ivey Baptist Church in Gordon...STEVE ANDREWS, a native of Macon, has been named ranger for the Henry County Unit. Andrews, who has a degree in forest technology from Abraham Baldwin College in Tifton, was previously employed for nine years as a forest technician with Georgia Kraft. He was active in scouting for 17 years and attained Eagle Scout status. Andrews and his wife, Georgia, have a son and daughter...RAY BRYANT has been promoted from Jefferson-Glascock Unit patrolman to aircraft mechanic at Macon headquarters. Bryant and his wife, Cindy, have one daughter and are expecting a son.



ANDREWS



BRYANT

They live in Louisville and attend Wadley Baptist Church...GARY WHITE has been assigned the ranger position for the Johnson County Unit. A native of Maryland, White graduated from West Virginia University (Morgantown, WVA) with a degree in forestry. Prior to being employed by the Commission, he served in the Peace Corps and was assigned to Bunkina Faso, West Africa as a reforestation forester. White and his wife, Katrina, live in Wrightsville.



WHITE

COMMISSION GIVES TREES FOR PROJECT

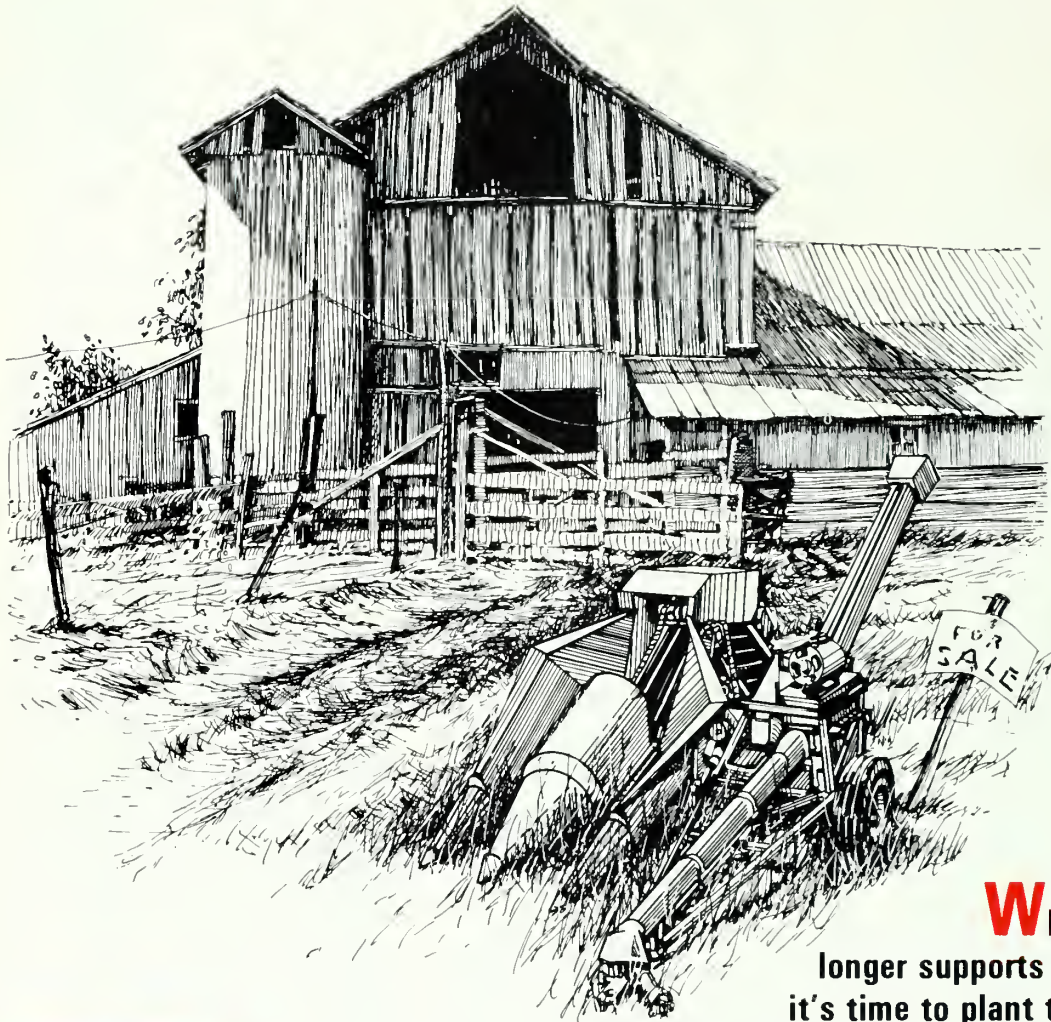
The Commission has donated 7,000 trees to be included in a special "Arrive Alive Tree Planting" event to be held at Stone Mountain Park April 1, 1989. Arrive Alive is a national organization dedicated to the objective of increasing public awareness concerning the tragic results of driving under the influence of alcohol and drugs.

The purpose of the Stone Mountain project is to focus attention on past tragedies caused by persons driving under the influence of drugs and alcohol. Approximately 6,000 trees will be planted in memory of teenagers killed in 1988 in drug or alcohol related driving accidents. All trees planted above that number will symbolize the thousands of lives being saved through Arrive Alive efforts. Trees donated by the Commission include 1,000 dogwoods, 1,000 sawtooth oaks, and 5,000 loblolly pine.

The event will begin with thousands of young people climbing to the top of Stone Mountain and lining up to form the words "Say Yes To Live." The group will then be shuttled down the mountain to plant trees on various sites.

The day will conclude with a concert sponsored by Z93 Radio and the first official showing of Lasershow '89. "It is expected to be the biggest event ever sponsored by Arrive Alive," said Jack Mathis, chairman of the group. "Drawing thousands of Georgia's youth to the park is evidence that our efforts are reaching the necessary people, and they are enthused about our projects."

The "Tree-mendous Day" will serve as a fund raiser for the Arrive Alive organization. Trees are being sponsored by businesses, civic groups, and individuals for \$20 each. "There is no limit to the number of trees we can plant, just as there is no limit to the lives we can save," Chairman Mathis pointed out.



When soil on the farm no longer supports row crops or pastures, it's time to plant those marginal acres in rapidly growing trees. The nurseries of the Georgia Forestry Commission provide millions of quality seedlings for the state's landowners and the agency's professional foresters stand ready to assist in site preparation, planting and proper maintenance as the stand matures. Contact the nearest Commission office for literature and further information on reforestation. Turn poor land into profitable land!

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Dispatcher Cathy Sue Farmer is shown on duty at the new 24-hour dispatch center at the Commission's state headquarters in Macon. Four others have been assigned to operate the system in Macon.

24-Hour Dispatch System Established

The ingenuity of the Georgia Forestry Commission has vastly improved the reporting of state wildfires, according to Jack Long, associate chief of forest protection.

The Commission is establishing a statewide, 24-hour dispatch system to become operative April 1 for reporting wildfires. It will provide immediate access to the Commission by dialing the nearest forestry unit in order to report a wildfire, Long said.

With the new updated system, all Commission district offices will have a dispatcher available until midnight to receive fire calls. After midnight, calls will be automatically transferred to a state dispatcher at the Macon headquarters. Dispatchers will promptly notify firefighting crews in the reported areas and maintain contact with them to expedite more equipment and resources if needed.

The new system is a definite improvement over the old telecommunications procedure. In fact, with the old system there was no standard communications procedure. "Depending on whatever system was available in each county, the fire, sheriff, police departments, or even a commercial paging system, was used for wildfire notification," Long said. Some of the counties had no formal communication system at all, he said. Despite the system used, it was inconvenient for the fire

personnel since they were confined to their homes monitoring the telephone.

This situation was further complicated according to Long, with an increased number of calls generated by the new fire permit law and others of a non-fire nature.

Many times, someone calling to report a wildfire would be referred to several numbers in the process, but now, all they have to do is dial the local forestry unit, 24-hours a day, seven days a week, Long commented.

"The new dispatch system will completely streamline the old procedure of reporting wildfires and offers vast improvements in safety and effectiveness," Long said. "All anyone has to do under the new system is call one number, the number of their local forestry Commission unit, and it's usually listed in the front of the phone book."

Three districts: Rome, Athens and Americus were activated Feb. 13 and are already functional under the new system.

As the dispatch system becomes further established in the remaining ten districts throughout the state, Long urges all callers to be prepared to give sufficient directions to the dispatcher to direct firefighters to the fire. For further information and operating dates of the system, Georgia residents should call their nearest county forestry unit, he said.

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ON THE COVER - Delicate green leaves begin to dress the Georgia woodlands and frequent showers swell meandering mountain creeks as another winter gives way to a bright and dazzling springtime!

Central State Hospital in Milledgeville has reported an annual savings of more than one million dollars derived from use of a wood energy system. The Georgia Forestry Commission coordinated installation of the system that was initially designed to provide 85 percent of the institution's energy requirements for a complex of 40 buildings.

Melinda Hogg, wood energy coordinator for the Commission's research department, said the reported savings in taxpayers' money by the state institution as resulted in a substantial increase in interest concerning wood energy systems. The research coordinator said increasing interest is being reflected in both public and private sectors.

"We've had inquiries ranging from industry to private homeowners," Hogg said. Although the energy situation is not as economically critical as when the Central State system was installed, there are indications that future predictions may not be so favorable; so the Milledgeville project could serve as an important role model for the future."

Hogg explained that the currently reported million-dollar plus savings are for 1987 - when the energy issue was not as critical as it was in the late 70s. However, she added that even though the energy pinch has abated, the system is still saving a tremendous amount of tax money. Reports from the Department of Human Resources and Department of Corrections indicate that both organizations are very pleased with the outstanding savings; Central State Hospital includes facilities operated by both organizations.

Population 3,800

The hospital supports a patient population in excess of 1,800 while the Department of Corrections houses more than 1,000 inmates in the area. The wood energy system now provides heating and cooling for virtually the entire institution.

Hogg pointed out that the substantial savings are especially impressive considering the downtime that occurred during the construction and maintenance. More delays were experienced when Commission research personnel made periodic adjustments in refining the system to operate at optimum capacity.

"In spite of all these delays," Hogg said, "it became apparent that the predicted million dollar annual savings objective would be reached."

Commission records show the system is now running smoothly and requires only routine maintenance and inspections. The system currently receives 10 to 12 tractor loads of chips per working day - making Central State the largest wood burning institution in Georgia. The magnitude of the operation becomes



Sprawling hospital and prison complex now depends on wood energy system for heating and cooling.

Wood Saves Hospital \$Million Annually

obvious when it is considered that one tractor trailer load of wood chips can weigh 22 tons.

A vital fringe benefit of the system is that the wood fuel requirement stimulates Milledgeville's local economy. Truckers and chippers are enjoying a large volume of business by providing wood. Another economic plus is establishment of a monetary value for wood that might never have occurred. Some of the wood used by the system consists of mill residue from forest industries, which would usually have to be disposed of through expensive dumping and filling procedures.

By-Product Utilized

However, most of the wood fuel is derived from what is considered an equally unsaleable by-product of forestry harvesting operations on non-industrial private land. Tops and limbs, with weak unsaleable trees, are chipped from these sites to provide wood fuel. The benefits multiply again when it is considered that these chipping operations provide private landowners with an economical means of site preparation that would otherwise be very costly or too expensive to even consider.

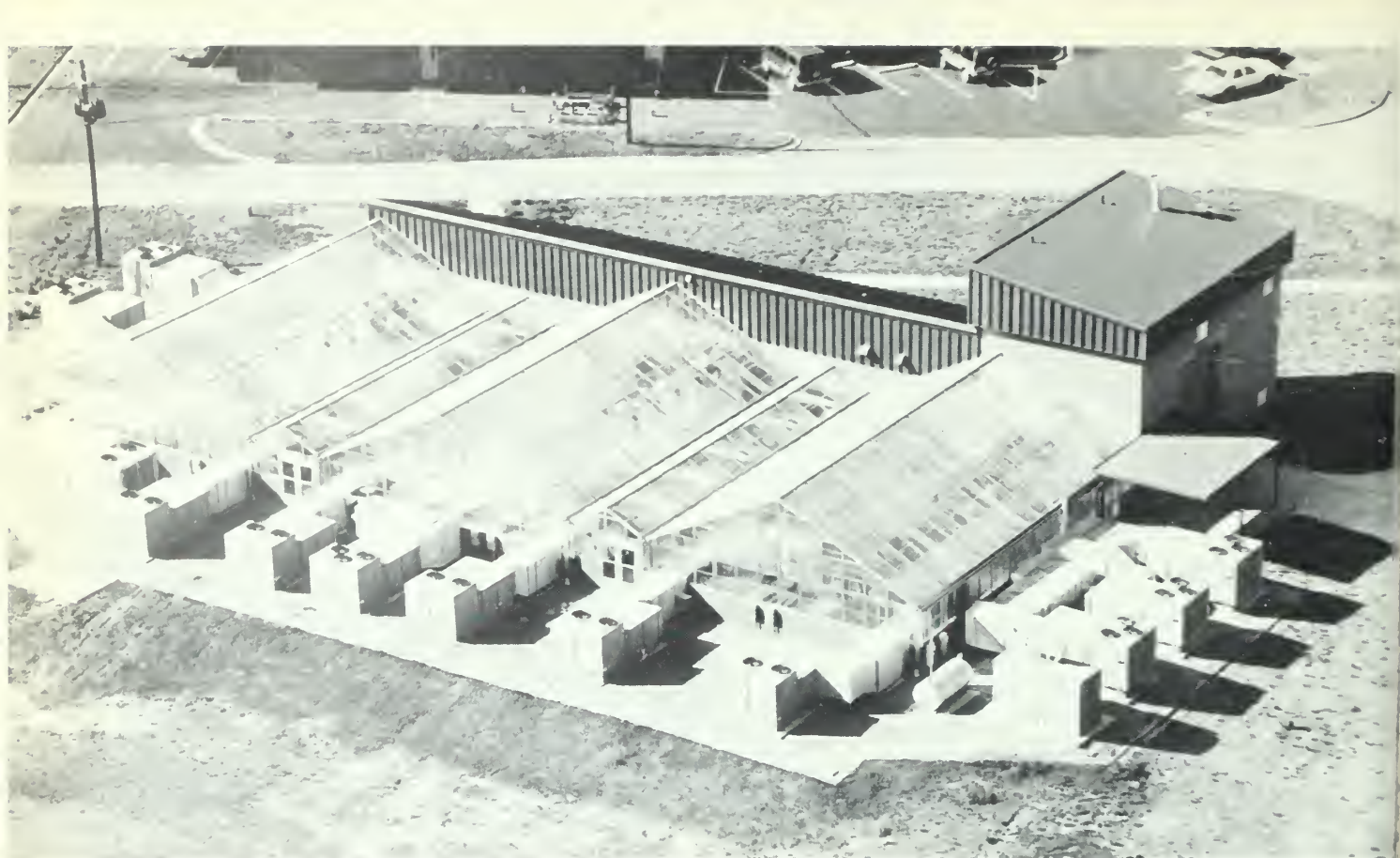
The final icing on this economic cake is

that chipping for wood fuel encourages reforestation by reducing the replanting costs. Everyone using a wood energy system - or living anywhere near one - also has an environmental benefit to appreciate in this age of increasing pollutants. Properly designed wood burning systems supply a clean fuel source with no measurable sulfur emissions. The potential problem of particulate emissions are controlled through specially designed air flow systems directed into the furnace of the boiler.

"The entire process evolves into an economic, environmental and social benefit that supports itself," Hogg said.

Another beneficial facet has been added to the system. An automatic ash collecting system provides a means of collecting and cooling ash for easy transportation from the burning site. The ash can be used as a fertilizer product.

Summing up the benefits of Central State's wood energy project, Hogg pointed out, "Other forms of energy are not renewable, but wood is a renewable resource that can serve our needs indefinitely - if properly managed. The economic savings created by this system is only one example of future role wood energy can offer in providing energy for homes and industry."



New research laboratory on the grounds of the Georgia Forestry Center in Macon is one of the most sophisticated facilities of its kind in the nation. The possible effects of acid rain and other pollutants will be studied there.

Environmental Studies Facility Completed

The 1.3 million Center for Forest Environmental studies, a sophisticated U.S. Forest Service facility designed to ascertain the possible effects of acid rain and other pollutants in Georgia and other areas of the United States, will be formally dedicated in Macon on March 24.

The premier facility, located at the Georgia Forestry Center in Macon, is currently testing for the possible existence of acid rain, according to Paul Berrang, manager of the research laboratory.

"There are other air pollution testing facilities, both international and nationwide, but their computer controls of humidity, temperature, and pollutants are not as sophisticated as the ones at our facility," Berrang said.

The growing concern for saving the world-wide ecosystem took on new dimensions in the 1970s due to a study by Swedish scientist, Svante Oden, which elaborated the harmful effects of acid rain, first discovered in 1852 by Englishman Robert Smith.

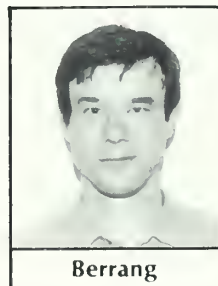
"The new facility is not an acid rain research center," Berrang explained. "It is an air pollution testing center. In other

By Chiquita Johnson

words, we will be working with other pollutants, particularly ozone, which are probably far more important to forests."

At present, the Center is using loblolly pine with the main emphasis on testing the effects of acid rain on soil chemistry, Berrang said.

The Macon facility contains a spacious greenhouse. Rain tables, built by Brenda Haney and Blanche Cabiness, USDA technicians, will be used to test the effects of acid rain on the seedlings for an hour, twice a week. The second part of the facility houses CSTR's (continuously stirred tank reactors) which



Berrang

are fumigation chambers, to study effects of ozone.

After the seedlings have been exposed to either pollutant, they are returned to the greenhouse where photosynthesis, soil nutrients, height, and growth are measured. "Seedlings are usually kept anywhere from one month to two years," Berrang said.

In the northeast United States concern about the effects of pollutants, especially acid rain, had been growing throughout the decade because of alleged forest die-back and the disappearance of aquatic life in several states.

Researchers had also proven under laboratory conditions that airborne pollutants, such as acid rain and ozone, had detrimental effects on the yield of soybeans, cotton, and other crops.

Due to these findings, Gov. Joe Frank Harris created a task force in 1984 to oversee a study of the effects of acid rain upon Georgia's environment. The Governor's task force was the culmination of the National Acid Precipitation Assessment Program started in 1981.

The National Acid Precipitation Program was established to conduct a ten year study into acid rain and its effects on vegetation

the United States. This congressional task force includes the Forest Response Program, which funded the new pollution facility in Macon.

According to Forestry Commission Director John Mixon, "We wanted to keep abreast of any changes in the status of acid rain in Georgia and investigate any problems that might arise."

Acid rain is formed when the gaseous pollutants sulphur dioxide and nitrogen oxide are released into the air. The burning of fossil fuels and car emissions produce these pollutants which are returned to the earth in the form of dry deposition (particles and gases) or wet deposition (snow, rain, and sleet) and further harm the natural environment.

The pollutant ozone has also been discovered to be a factor in the production of harmful acid rain.

"Ozone is an important pollutant in its own right. It is proven to effect crops at ambient concentrations," Berrang said.

Ozone is formed in the presence of sunlight from nitrous oxides (cars and power plants) and hydrocarbons (cars, trees and other plants.)

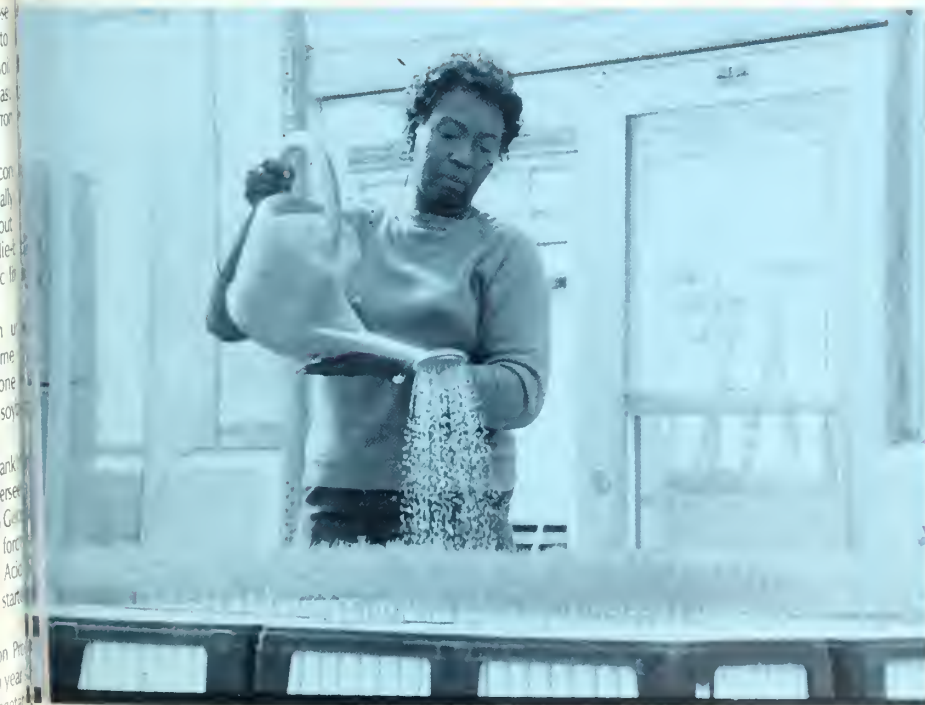
There is fairly good evidence to suggest that acid rain affects the lakes and streams, and changes the population of fish and other aquatic life," Berrang said.

According to acid rain researchers, acid rain may cause direct acid damage to leaves of trees, leaf cuticle erosion, leaf cell acidification, and foliar leaching.

It was the desire of the Forest Service to test the trees and other vegetation in order to certain the exact effect of air pollution on the nation's forests. Through the Center for Environmental Studies, hopefully, the irreversible toll modern living has taken on our natural environment will be remedied.



Brenda Haney, above, installs and adjusts rain making equipment as Blanche Cabiness (below) manually waters experimental plantings.



Untimely Death Claims Forester

Darrell A. Busch, 32 year old Commission senior forester and coordinator for the Ernst Brender Demonstration Forest, died recently in a Macon hospital.

Services were held at the Church of Jesus Christ of Latter Day Saints. Burial was in Laurel Hill Cemetery, Millcreek Township, Pennsylvania.

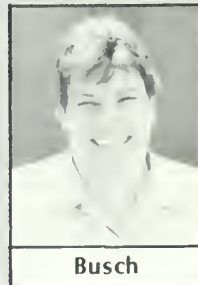
Bryan Condie, first counselor of the Bishopric, officiated.

A native of Vallejo, California, and forester graduate of West Virginia University, Darrell was employed by the Commission in March 1987 as a forester with the Gwinnett County Unit. In August 1987, he was transferred to the Brender Demonstration Forest to coordinate various facets of the experimental forest and set up demonstration projects related to the forestry needs. The 5,000 acre forest tract in Jones County is a cooperative effort of the Commission, the USDA - Forest Service and Southern Industrial Forest Research Council. As Commission coordinator for the Brender Forest, Darrell initiated numerous demonstration projects.

Well known for his diligent and innovative forestry activities, Darrell was a member of the American Society of Foresters. He was also an elder in the Church of Jesus Christ of Latter Day Saints, and teacher's quorum advisor for the Church. Darrell also served as an assistant Scoutmaster in the Boy Scouts of America.

Survivors include his wife, Miriam E. Busch of Macon; a son, Karl Busch of Macon; his parents, Mr. and Mrs. Morgan Busch of Washington, D.C.; two brothers, Morgan Busch of Sandy, Utah and Arlen Busch of Washington, D.C.; two sisters, Laura Busch and Helen Busch, both of Washington; and paternal grandfather, John Busch of Carbon County, Utah.

Darrell's personality and sense of humor made him well liked among co-workers. Darrell Busch will be missed.



GEORGIA HARDWOOD

A mill in Hazlehurst is producing a quarter of a million tons of hardwood chips and 26 million board feet of quality hardwood lumber annually, and a significant amount of that high volume is finding its way across the Pacific, thanks to a vigorous export program.

Thompson Hardwoods, which now employs 120 people, is loading three to four 40-foot containers of lumber weekly for shipment from the Port of Savannah to customers in the Orient. Hardwood chips, to be used in the manufacture of fine paper, are being exported to Japan and Taiwan.

Bill Thompson, president of the company, and his son, Nordeck, vice president of Thompson Hardwoods, said they are presently negotiating a sales agreement in Italy and will be represented in the Georgia booth at the Interbuild Trade Show in England this year to further promote their products on the world market.

Meantime, Nordeck Thompson said he will accompany John Wells, Commission forester now serving as trade specialist with the Georgia Department of Industry and Trade, this spring to five foreign countries on a cooperative mission to seek new markets.

Thompson said the company appreciates the export leads and other assistance given by Wells. "It is very unusual to have that type of hands on assistance and quality trade leads available from a government agency," he said, and expressed his appreciation to the Commission and Industry and Trade for giving the firm the type of exposure to overseas contacts that an individual could not obtain on his own.

A new facility was recently built at the mill to handle production destined for export and nine employees were hired to man it. It was described as part of a four-phase expansion project that is expected to result in a growth rate of 25 percent for the company within the next three years.

There is considerable waste in the production of quality hardwood lumber, but the company has cut it to a minimum by selling low grade material to pallet manufacturers and one buyer takes all sawdust from the mill. Propane gas is now used to produce steam for the dry kiln, but a sys-

South Georgia Lumber Mill Expands Exports

tem is being phased in to use waste to fire the boilers.

Although the company owns some timber tracts, most of the timber is purchased from landowners in a wide area of South Georgia. Red oak leads the list of species utilized by the mill, followed by white oak, ash and cypress.

Thompson Hardwoods is running two nine-hour shifts six days a week to satisfy customer demands in both domestic and foreign markets.

In discussing the export side of the business, Bill Thompson had high praise for the dock facilities at Savannah and said he was especially appreciative of the cooperation shown his company by the East Coast Terminal.

The proximity of the Hazlehurst mill to the state docks, the availability of the raw forest product throughout the area, and



the emerging foreign market work well for Thompson Hardwoods as it reaches out for an even greater export trade.



Nordeck Thompson examines hardwood chips destined for the Orient. In top photo confers with his father on mill production and export schedules.

David J. Pierce had been in the carpet business for 26 years when he decided to switch to wood flooring.

Today, Specialty Flooring Inc. of Ellijay, manufacturers of Appalachian Hardwood Floors, is flourishing after less than two years in operation and Mr. Pierce has no regrets in having made the change.

His flooring mill, which started with just three employees and now has 30, is one of the few mills that presently manufactures honest to goodness tongue and groove hardwood flooring. It is a type of durable, solid plank flooring that sharply declined when carpeting, tiles and other coverings became popular.

Thanks to many architects, interior designers and builders, however, there is a going back to the elegant wood floor that provides a choice of species that can be finished to bring out the natural beauty of the grain.

Pierce owned and operated a carpet mill in nearby Dalton and commuted from Ellijay. "One reason I started this company," he said, "is to have my business in my hometown." He gave other reasons, too. "There had been an oak flooring mill in the town for more than 40 years, but now it is closed and I'm able to hire a few experienced people who once worked here," he said. The ample supply of wood in the area was also a reason.

Although the domestic market is good, Pierce is also enjoying an expanding export business. "We just received an order for 10,000 square feet of flooring from a customer in Belgium," he said recently, "and it is a repeat of an order we had last year." The company is also exporting a by-product - strips milled from edgings too narrow for flooring planks - to Jamaica where they are used in parkay flooring.

The flooring is exported in 40-foot containers through the Port of Savannah. Last year, six containers were shipped and two more have been ordered in the first two months of this year.

The mill starts with rough lumber from sawmills and lumber yards within a 250-mile radius of Ellijay. The wood is inspected, split into rough planks and then processed and planed. Inspectors remove defects and run the boards through the finishing machine. After end matching, the finished flooring planks of random lengths are graded, again inspected and packaged for shipment.

The company offers custom flooring of popular, white oak, red oak, ash, pecan, cherry, maple and walnut, as well as yellow and heart pine. It also manufactures flooring from exotic woods such as Brazilian mogani, African rosewood and African teak. Some wall paneling is produced by the mill.

Pierce admits that there is considerable waste in a hardwood flooring operation, as only choice pieces end up in the shipping

department. He is, however, selling sawdust and has managed to save about 60 percent of dry kiln heating costs by using solar energy in combination with electricity. An automated production line will be opened this summer and that will trim labor costs.

"In the 1960s everyone was covering up hardwood floors with carpet," said Gene Carter, the company's national sales

manager. "Today, hardwood is an item of prestige."

Pierce is grateful for that trend and so are others in the little mountain town of Ellijay. They are glad the former carpet manufacturer came home to revive an industry that provides good jobs and utilizes a raw product that grows so abundantly throughout North Georgia.

North Georgia Flooring Plant Captures European Market

"Having John's help is like having another salesman," said Nordeck Thompsen, vice president of Thompson Hardwoods, in describing the cooperation his company receives from John Wells, staff forester of the Georgia Forestry Commission who is now attached to the Department of Industry and Trade as trade specialist.

"We have benefited from his export leads and he continues to help us develop foreign markets."



Wells

David J. Pierce, president of Specialty Flooring, Inc. of Ellijay, also had high praise for Wells. "He works with us ever so closely...he helped us with the European market and he continues to give us assistance as we build our export trade."



This flooring machinery will soon be replaced by an automated, higher production system. At top, Forest Ranger Larry Benson, left, and David J. Pierce, company president, shown at solar energy dry kiln.

PACKAGED WOOD

A Better Way To Hit The "Esthetic Fireplace" Market

Most Georgians Are Thinking Of The Hot Summer Ahead, But Firewood Dealers Are Now Cutting And Curing Their Wood And Distributors Are Making Contracts For Next Winter.

The first time Dan Shirley saw packaged firewood for sale, his first thought was "who's going to buy that?" That was seven years ago when Shirley was traveling for an engineering firm. Now Shirley has retired from engineering and is in the firewood business with an entrepreneur's visions of great potential for a changing market.

The die for this now rapidly changing market was cast in the mid 70s when the interest in wood as an alternative fuel source for home heating mushroomed as a result of the energy crisis. A variety of woodsplitters and firewood processors suddenly became available and firewood entrepreneurs abounded. Some succeeded. Many fell by the wayside.

Today, machines and the marketing are still being refined. The market has evolved into two areas: cords for heavy residential use and packaged bundles marketed mainly to an esthetic fireplace market concentrated in urban areas.

The fact remains that wood heating is less expensive than other fuels. According to wood expert Michael P. Folkema in his book "Handbook on High Capacity Production and Marketing of Fuelwood," one cord of wood is the equivalent in BTU's to 6250 kilowatts of electricity or 2120 cubic feet of natural gas.

Romance Lacking

Dan Shirley is taking advantage of these developments. "Since I'm retired, I don't guess you could call the firewood business my occupation," said Shirley looking out at stacks of hardwood from his National Firewood Company office near Dahlonega, "but it's certainly my full-time preoccupation."

Shirley initiated his "preoccupation" in 1987, but like many others attracted to the business, soon discovered it was more complicated than he anticipated, riddled with financial and technical pitfalls that marred the romanticized notion of cutting wood for a living like a modern day pioneer.

"I admit that I had to learn from scratch," Shirley said.

In spite of Shirley's experience, he seems to have learned his lessons well and maybe even created a few innovations along the way. Shirley and his counterparts now find the packaged firewood market an in-



National Firewood company's manager Michael Gilstrap, left, and Dan Shirley, owner inspect a load of packaged firewood. The company specializes in firewood, supplying to urban areas. Above, opposite page, shows what a well packaged bundle of firewood should look like - tight and solid so the customer is not buying a lot of air. Dan Shirley believes his company excels in such packaging. At bottom, Gilstrap packages firewood

creasingly competitive area with luxury and prestige implications.

"When I first saw this thing (packaged firewood), I thought it was sort of a joke," Shirley remembers, "but as time went on, the more I thought about it, the more I wondered. So I did some research and eventually went into the business."

An engineering graduate of Georgia Tech, Shirley was convinced that a lot of improvements could be made in the technical and mechanical aspects of the business. Having an engineering and business background, he progressed with what might be described as mechanical

innovations seasoned with economic pragmatism.

However, Shirley does not claim to have done anything unique. He prefers to describe his ideas as "improvements." But his survival as a small entrepreneur, in business where many competitors - large and small - are turning belly-up, says something about his abilities.

Shirley said the small operator may fold up under the inability to meet supply and demand requirements on a tight schedule while their larger counterparts can suffer from different complications.

"Although the big operators have pr-

duction capabilities," Shirley pointed out, "transportation costs to distant markets can be a problem." Shirley said he knows of one large company that has apparently ceased operation because of this problem.

At present, Shirley says he considers only our operations in Georgia to be major competitors. However, he said out-of-state operators from Alabama, Tennessee, South Carolina, Virginia and Canada are also transporting packaged firewood into Georgia.

"The way I see it," Shirley said, "the success of my competitors - and myself - will depend on quality, adapting to technology, wholesale pricing and innovative approaches to an increasingly sophisticated market."

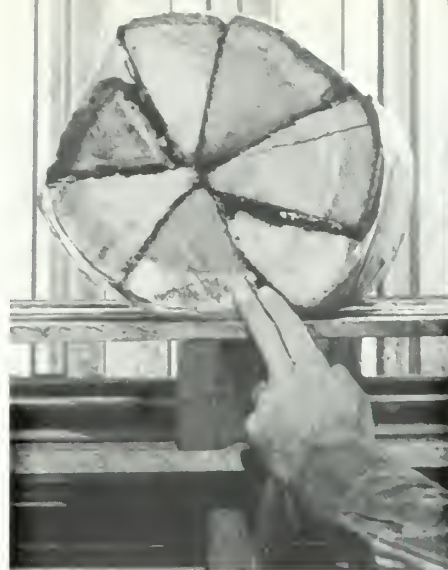
Shirley emphasized that selling firewood is no longer just cutting a pickup load of wood and going door to door. "This is going to be a very big business - on a national scale for some operators," he said.

"Social Wood Market"

Shirley is referring to what is now known in packaged firewood market research as "recreation and entertainment markets." Most market research agrees that while the overall demand for firewood is increasing every year, the real money is to be made by packaging small bundles in plastic and making them available to the public through convenience stores or similar facilities. These bundles, now also known as "social wood," generally have plastic handles and an attractive label describing the contents.

Some of the larger, established packaged firewood operators are reporting 100 percent increases per year in sales for the past several years. Researchers say the reason for increasing popularity is simple - convenience.

"It all sounds easy enough," Shirley said. "Just start packaging firewood and have the



convenience stores keep a stack by the door. But that's just not how it works."

Shirley is right. First of all, the firewood packager must be sure he can get a supply of wood at a price that will return a profit. Then, he must be able to sustain the supply, or succumb to other suppliers waiting in the wings.

That is, if the supplier can get such an arrangement in the first place. Shirley has found the competition for such accounts to be heavy.

Although there are many chain stores buying packaged firewood by the tractor trailer load, these establishments order months in advance (sometimes even a year in advance), so they want to deal with established dealers who can be relied upon to supply the wood. This makes it difficult for newcomers to break into this business.

Generally, these accounts operate through a central distribution center to which the firewood shipment is delivered. Firewood
(continued on pg. 17)

Former Dean Dead After Long Illness

Dr. A. M. Herrick, Dean Emeritus of the School of Forest Resources, University of Georgia, died last month following a prolonged illness.

Dr. Herrick served as dean from 1957 to 1980 and is credited with leading the school to national prominence by strengthening its faculty and diversifying its instructional and research programs.

Dr. Herrick, a native of Syracuse, NY earned his BSF and MF degrees at the State University of New York and the Ph. D at the University of Michigan in 1945. He was employed by the U. S. Forest Service in 1935, and his first association with the University of Georgia was as assistant professor from 1935 to 1937.

He left Georgia for Purdue University, where he rose from instructor to professor during the next 20 years and acquired a reputation as an excellent teacher and productive researcher.

After returning to Georgia in 1957 as dean, Herrick built support for the School of Forestry from its alumni; the Georgia Forestry Commission, the U.S. Forest Service, and forest industry. Herrick's vision of the forest

as a set of interdependent resources and his strong sense of husbandry led to an innovative, structured curriculum which acquainted every student with all forest resources and specific expertise in one. The school became accredited by the Society of American Foresters during his deanship.

After nearly 23 years as dean, he retired to Jefferson, in 1980.

Among the many honors he received, he treasured being inducted into the Georgia Foresters Hall of Fame in 1970, being elected a Fellow in SAF in 1977, and having a recreational lake on the University's campus created and named in his honor.

A memorial service was held for Dean Herrick at the First United Methodist Church in Jefferson. He is survived by his wife, four daughters, one stepson, 13 grandchildren, and two great-grandchildren.



Herrick



Columbia County Forestry Unit

Editor's Note: First in a series of stories on outstanding county forestry units.

By Howard Bennett

Columbia County, a collection of small towns that have now mushroomed into sprawling bedroom communities for nearby Augusta and the Savannah River Project across the river in South Carolina, is one of the fastest growing counties in Georgia.

The once rural county presently has 143,000 acres in forests, but many of those areas in trees are rapidly shrinking as construction of roads, residential subdivisions and shopping centers continue to take over the land.

Ranger Wayne Meadows of the Georgia Forestry Commission's Columbia County Unit said that although much forest land is being lost to urbanization, "we still have plenty of work to do as a forestry oriented organization." He pointed out that population growth brings about an increase in debris burning "and debris burning is the major cause of forest fires."

Ranger Meadows was born in Moultrie but it is hard for him to consider the South Georgia city or any other place his hometown; his father was in the Army and the family lived in many sections of the world. Much of the ranger's schooling was in Germany.

The family ultimately settled in Augusta, as Fort Gordon was his father's last assign-



ment before retirement. Meadows studied engineering at Augusta Tech and came with the Commission in 1962. He was named ranger of the Columbia County Forestry Unit two years later.

"There is a lot of satisfaction working with landowners and other citizens in our county," said Meadows. "It's interesting work and it's rewarding." He said the unit is "especially fortunate in having a very fine relationship with our county government." He said the county commissioners even presented the unit with a Chevrolet Blazer, a handy vehicle for getting over rough back roads and wood trails.

The ranger is an expert cabinet maker

and carpenter. He led the unit personnel in building one of the most attractive units in the state, a rustic structure with many innovative interior features. He supervises and works with his personnel in a well-equipped cabinet shop to make wall dividers, book cases, display cases, crew room kitchen cabinets and other wooden fixtures for units around the state.

The main business of the Columbia Unit, of course, is the suppression of forest wildfires, and whenever possible through education, the prevention of fire. The ranger and his three forest patrolmen work with two fire suppression units - transport trucks with crawler tractors - and a water tank truck.

The ranger is an expert cabinet maker

Many Changes Seen

The veteran ranger naturally has seen many changes in the Commission during his almost 27 years of service, but he said the most obvious advances have been in communications, weather forecasting and firefighting equipment. "When I came here in the early sixties," he said, "we were using a John Deere 420 and a John Deere 40, tractors so small that they would look almost like Tonka Toys compared to what we have today." He pointed toward two big 450 John Deere crawlers mounted on transport and ready to go when the next fire came in.



Meadows said he learned "the hard way" several years ago that all forest fires cannot be treated as routine suppression operations. He was plowing a break at a stubborn fire when a hydraulic line suddenly snapped, spilling flaming liquid on the tractor. He was severely burned and spent a week in the hospital and three months in convalescence before he was able to resume his duties.

That was not his only close brush with death. Shortly after recovery from his burns, he was involved in a chainsaw accident that almost cost a leg. In his youth, a relative thought he was shooting at a burglar when he fired a pistol through a window and struck Meadows. It was feared for a while that he would not live. In recent years he has suffered two heart attacks, but has made a remarkable comeback.

Misfortune Forgotten

Today, the ranger has little time to reflect on those past misfortunes. Anyway, if he does have a charmed nine-lives-existence as some friends have suggested, he has four more to go! The ranger and his wife, Joyce, attend Powell Baptist Church.

When fires are not cropping up around the county or pre-suppression firebreaks are not being plowed, personnel are busily working on a project in the cabinet shop, handling tree seedling orders for landowners, doing maintenance work on equipment and buildings, or attending to their regular or seasonal chores.

The unit is proud of its role in the Rural Fire Defense Program - a Commission administered project that helps provide equipment and training for rural volunteer fire departments. "We have eight well organized RFD units in Columbia County," Meadows said, "and this is the kind of fast growing county that needs the protection."

Forest Patrolman Neil Hinegardner was led to the cottonwoods of his native Kansas

during his youth, but now is concerned with the protection of the green pine forests of Columbia County.

"We were a wheat growing prairie state," he said, "and when I was in the fourth grade, we joined other schools across the state in voting for the species that would be our state tree and naturally the cottonwood that grows along the rivers and branches came in first."

But Hinegardner, not unlike Ranger Meadows, has been a world traveler and has enjoyed observing the forests of many lands. He served as a communications repair and maintenance specialist for this country's military establishment and the nation's allies. His wife, Ellen, accompanied him on all foreign assignments, except for a two-year tour of duty in Vietnam.

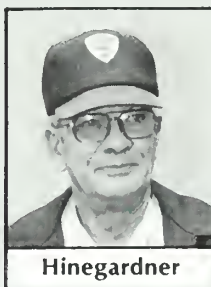
He said he came with the Commission in

"We are very fortunate to have Wayne (Forest Ranger Wayne Meadows) and his people representing our county. The unit is very efficient and I have never known them to refuse a call when needed. When we have visitors in the county it is a real pleasure to bring them by the forestry unit...it's almost like walking into a state park. We are also pleased that Wayne only makes budget requests that he feels are absolutely necessary."

Vince Robertson
Columbia County Commissioner

"The Columbia County Unit never fails to come to our assistance when we need them. They have good people at the unit and we have always enjoyed an excellent working relationship with them."

Bill Griffin
Chief, Harlem Fire Department
(one of five stations under RFD Program)



Hinegardner

1978 "because I am a country boy by birth and I have always liked the outdoors." He said he never finds it boring at the unit because there is "always an interesting variety of things to do."

The patrolman said he "thoroughly enjoys working in the cabinet shop" and serving as coordinator of the Columbia County RFD program. He helps the volunteer fire departments obtain equipment and training. He has become an experienced firefighter during the decade with the unit and is innovative in designing and repairing suppression equipment. "Some of us have a little bit of talent and a lot of determination," he said, "and we'll try anything."

The patrolman lamented that "nothing is forever and I'll some day have to leave, but I intend to enjoy my work while I can."

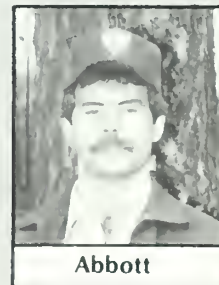
Patrolman Steve Abbott has always enjoyed the woods.

Born in Michigan, but moving with his family to Georgia at an early age, Abbott said, "I have always liked to hunt

and as a hunter I spend a lot of time roaming through the woods and just enjoying the beauty of the seasons while looking for game." He said his appreciation of nature in the wild deepened, however, when he came with the Commission in 1982. "That's when I became conscious of the tremendous economic value of our trees," he said.

But Abbott learned that danger can lurk

When there are no forest fires to battle or other work that is pressing, the unit's crew turns to the well-equipped shop to build a wide variety of custom fixtures for the Commission.



Abbott



in the forest when fire strikes. "It was my first fire, about 17 acres," he related, "and I made the mistake of making a direct attack on a fire that should have been attacked from a different angle...an indirect attack would have been the correct procedure on that particular fire." He said he managed to escape by backing his tractor out, but not before suffering serious smoke inhalation.

The patrolman said good training has helped him "keep out of trouble" since that incident and Ranger Meadows today

"Ranger Wayne Meadows instills a lot of personal and unit pride and consequently the Columbia Unit is always clean, orderly and efficient. It is a sharp unit doing a good job and it is a real asset to the Washington District."

***William (Cliff) Hargrove
Washington District Forester***

considers him a "careful, efficient firefighter and a credit to our unit."

Abbott is a graduate of Evans High School and he attended Augusta Tech, where he learned welding and other skills. His wife, Melody, works in retail advertising for The Augusta Chronicle/Herald.

In addition to the benefits of outside work and the opportunity of being in the woods, the patrolman said he also likes

his employment with the Commission for the security it provides and "the chance it gives me to work with many landowners and others in our county."

Patrolman Gene Sharpe made the Western Tour to help fight the big mountain fires in 1987 and again in 1988, but "both times out there I missed that big John Deere 450 tractor," he said.

Battling an inferno in mountain terrain too steep and rough for crawler tractors made Sharpe more appreciative of fire fighting methods back home in his native Columbia County.

Sharpe, who served in Jefferson and Richmond Counties before coming with the Columbia Unit in 1987, said he enjoyed his detached service out West and "I had to go all the way to Oregon to meet some Commission personnel from South and North Georgia for the first time."

The patrolman is a graduate of Evans High School and worked as a carpenter for his father, a building contractor, prior to his employment with the Commission in 1984.

"I was serving as a volunteer fireman with the Martinez Fire Department when I learned about the Forestry Commission and I knew I would like that kind of work,"

said Sharpe. After serving in two other counties, he said "it's good to be back home...this is the unit I want to be a part of."

It doesn't matter to Tower Operator Edie Casteel whether the weather is fair or foul. On fair days, she is high above the landscape of Columbia and adjoining counties scanning the forests for smoke. On rainy days, she is in the unit office working on reports, answering the phone and handling other routine duties.

The tower operator is a graduate of Harlem High School and she and her husband, John, have a three-year-old daughter, Dezirae. Her work with the unit is seasonal, but she likes her job and wishes it were full time employment.

When asked about the tiresome task of climbing the many steps to reach her cab atop the tall tower, she said "It's no trouble at all, and besides, it's good for the heart."

Casteel said the dispatching is the work she likes best. "It's exciting when things are happening and we have a lot of traffic on the radio." She has an opportunity to experience some dramatic moments during each fire season.



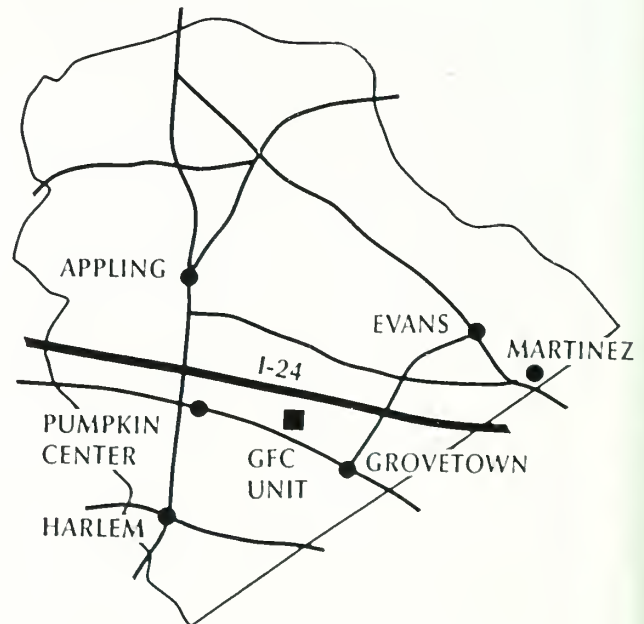
Sharpe



Casteel

COLUMBIA COUNTY FORESTRY UNIT

- 143,000 acres of forests under protection.
- Average fire held to 4.13 acres (less than the state average).
- 1,300 permits to burn issued in eight months.



Forest Conference Set

The 48th Southern Forestry Conference and annual meeting of the Forest Farmers Association will be held May 10 through May 12 at the Excelsior Hotel, Little Rock, Ark. The theme of the conference will be "The Future Outlook for Forestry in the South."

John McMahon, vice president of timberlands, Weyerhaeuser Company, Tacoma, Wash., will give the keynote address.

Other speakers will include Dr. Larry Willett, Arkansas Extension Service; Dr. Jeff Jackson, Georgia Extension Service; and Dr. George Kessler, South Carolina Extension Service, Clemson University.

Officials said capital gains taxes and the passive activity loss regulations will be "hot" topics of discussion. Dr. Harry Haney, forest economist at Virginia Tech will conduct a workshop. For more details, contact the Forest Farmers Association, Box 5385, Atlanta, GA 30347, or call (404)325-2954.

UGA Appoints Field

Dr. Richard C. Field has been appointed the continuing forestry education specialist at the University of Georgia's Center for Continuing Education.

He will be responsible for developing continuing education programs in forestry, forest products, and other areas relating to natural resources. The programs will be conducted at the Georgia Center and throughout the state.

Field was previously with the USDA Forest Service as a research scientist in the Southeastern Forest Experiment Station and as an operations research analyst and planner with the Southern Region of the National Forest System. He received his BA in forestry from the University of Michigan and his master's and doctoral degrees in forestry from UGA.

It Was Smokey's Night

It was Smokey Bear Night when the University of Georgia Bulldogs recently defeated the Mississippi State Bulldogs even though the UGA cagers lost by a 10-9 point, Smokey was a big winner among the spectators.

Ranger Tommy Hewell of the Clarke County Forestry Unit was escort for Smokey in the program on forest fire prevention before the crowd of basketball fans at the UGA Coliseum in Athens, and Sgt. Bryant, patrolman from the unit, was in line the Smokey suit.

The Commission is arranging to also have Smokey appear at a Braves baseball game at Atlanta-Fulton County Stadium this season.

Annual Conservation Workshop Planned

Some 300 Georgia high school students are expected to attend the annual Natural Resources Conservation Workshop, June 11 through 16, at Abraham Baldwin College in Tifton.

The week-long workshop will involve classes and field trips as well as recreational and social events. Subjects to be taught will include soil conservation, forest protection and management, wildlife management, research in conservation and water and mining conservation.

Instructors will include personnel from the Forestry Commission, Soil Conservation Service, Department of Natural Resources, U.S. Forest Service, Georgia Mining Association and other agencies.

College scholarships totaling \$2,500, cameras, plaques and \$500 in cash will be awarded to top achievers at the conclusion of the workshop.

For additional information, contact: Delores Pope, Department of Natural Resources - Route 3, Box 481, Albany, GA 31707 or phone (912) 435-2318.

Information is also available at all Forestry Commission offices.

Interstate Sets Record

Interstate Paper Corp. for the third consecutive year set all-time highs in 1988 for production, payroll, and wood purchases at its Riceboro, Georgia facility, according to Dean D. Barger, vice-president and general manager.

Barger said the record production of kraft linerboard, used in the manufacture of corrugated boxes and shipping containers, was part of a continued industry-wide trend of strong demand in both domestic and export markets. He said about 20 percent of Interstate's output is shipped abroad.

Interstate produced 269,170 tons of linerboard in 1988, an increase of eight percent above the 1987 production.

Employment and payroll also reached new records in 1988, Barger said. Wages, salaries, and employee benefits last year totaled approximately \$13.5 million, up \$1.3 million over the previous year.

The majority of Interstate's employees reside in Liberty, Wayne, Long, McIntosh, Bryan, and Chatham Counties.

Substances Studied

A world renowned co-recipient of the 1985 Marcus Wallenberg Prize for noteworthy research in the field of wood utilization, is also working on a process to alleviate toxic and cancer-causing substances in one of Georgia's largest growth industries, modern paper and pulp mills.

Karl Erik-Ericksson, a research professor of biochemistry at the University of Georgia, is working on several techniques that utilize natural fungi and their enzymes. These techniques increase paper production and the pulping process at mills which use mechanical pulping to produce newsprint and lightweight-coated paper.

Dr. Eriksson joined the university after nearly 25 years as the head of microbiological and biochemical research at the Swedish Pulp and Paper Research Institute.

"One reason for my coming to Georgia was because I felt I could make a contribution to the state's pulpwood industry," he said.

Institute Is Scheduled

Union Camp Corp., the Coastal Area Teachers Educational Service and Georgia Southern College will co-sponsor the 18th annual Teachers Environment and Technology Institute June 12 through July 7, and July 5 through July 21, 1989 at Georgia Southern College in Statesboro.

The Institute is being developed in order to enhance the science courses taught in Georgia by the inclusion of appropriate energy and power information, officials said.

The first session, on energy and technology, will be a funded institute with opportunity for educators to earn 10 quarter hours credit towards certificate renewal.

The second is an energy and power summer workshop for Georgia Science Teachers, Grades 7-12.

Interested persons should contact: TETI, Continuing Education, P.O. Box 8124, Georgia Southern College, Statesboro, GA 30460 for further information.

Annual Contest Opens

The Hardwood Research Council is now receiving entries for its sixth annual competition for outstanding original research in the area of hardwood forest management. The winner receives a \$1,000 cash award plus an expenses paid trip to the council's 1990 Annual Hardwood Symposium to present the winning paper.

Entry applications are available by writing to the Hardwood Research Council, P.O. Box 34518, Memphis, TN 38184-0518. All entries must be received not later than October 3, 1989.

Mystical Indian Forest Now Preserved As Park

Dwelling Place Of The Great Spirit

By Bill Edwards

Jackson County's Hurricane Shoals Park is a model example of preservation, restoration and recreation coexisting harmoniously in a forest environment. Cherokee and Creek Indians once believed this forest to be a dwelling place of The Great Spirit. If this theory can be relied upon, the area may still be watched over with interest in forest preservation.

Hurricane Shoals Park, developed primarily through private donations and efforts of volunteer workers, offers a scenic retreat for picnics, family reunions, and other outdoor gatherings in an area of carefully preserved Piedmont tree species, including pines, oaks and other hardwoods. Development was done with a long range view on continuing harmony between man and nature. Development and restoration include a grist mill, amphitheater and a long wooden bridge stretching over rocky shoals of the North Oconee River. Southern yellow pine was used in virtually all projects to maintain the harmony with nature objective.

Georgia's early pioneers were told by Indians of a faraway, mystical forest where The Great Spirit lived. Both sides of the river (then known as Econo River) from Yamtrahoochee (Hurricane Shoals) to Yamatcutah (Tumbling Shoals) was considered a holy forest by Creeks and Cherokees in the area. Although they were at war, both tribes agreed there would be no fighting or bloodshed of any kind in this forest. The agreement also included the understanding that no bird or animal was to be killed; hunting was to be done elsewhere.

In 1784, the first two white men found the forest with disastrous consequences that lingered for many years. Explorers Jordan White and Jacob Bankston were told by a wandering band of Choctaw Indians of a mysterious forest where The Great Spirit lived.

Bankston and White took careful notice of the description and location of this remote forest. On April 22, 1784, the two

pioneers found the Indian holy grounds - a secluded forest, thick with towering virgin timber and teeming with game. They were the first white men ever to set foot in this area where, in spite of constant tribal warfare, no fighting or hunting was allowed. The first thing Bankston and White did was kill a bear and eat it on the spot. This

irritated the Indians.

Shortly after the bear was eaten, Bankston and White decided to leave (probably because irritated Indians were trying to kill them). However, on June 20, 1785, Bankston returned with a group and established a settlement that extended upriver through the holy forest to Hur-



cane Shoals. The settlement included a Baptist church, schoolhouse, grist mill (now restored from Southern yellow pine), an iron furnace, and a sturdy wooden fort to ward off disgruntled Indians who had not forgotten the bear-eating incident or the continuing disregard of white settlers for the sanctified forest haven.

American Indians often considered forest areas as an actual part of their beings - a oneness and blending of human life with nature - and forested areas considered holy ground were subject to even more sensitive beliefs. So when white settlers began to cut trees, and kill animals in the Hurricane Shoals area, problems increased.

By 1801, open hostilities with Indians in the forest were common. For instance, one afternoon a Mrs. Glover saw "a painted Indian" pick up her little son and kill him by smashing his head against a rock. Mrs. Glover shot the Indian, who was skinned. The skin was used to make a razor strap.

Similar incidents and skirmishes in the forest continued until civilization encroached and the Indian threat diminished. But not before a serious battle on the shoals resulted in the death of Dr. Henry Perrault, the settlement's doctor, minister and school teacher.

As the years passed, the Hurricane Shoals forest continued to be of historical significance. The iron furnace was used during the Civil War to make cannon balls for the Confederacy, and an early cotton gin was built just up river from the shoals. Increasing population in the forest brought on construction of a covered bridge. Virgin timber furnished huge logs



necessary for the project. The bridge, built in 1870 remained an historical landmark until it was burned by vandals in 1970.

However, the Hurricane Shoals forest and river retain much of their natural charm and attract many visitors each year. A Fall Arts and Crafts Jamboree is one of the park's annual highlights. The event features plenty of fun, food, music and amphitheater performances - as well as arts and crafts. Crafts are made from foreign and native woods by skilled artists - products range from rocking chairs to fruit bowls.

Foreign woods include exotic species such as padauk and African zebra wood. Then there are crafts made from such popular familiar species as Southern yellow pine, white pine, maple, cherry and oak. The ever popular oak porch swing is one of the best sellers of the jamboree.

The jamboree winds up the year for Hurricane Shoals. The park (and mystical forest) close for the winter months. After all that has happened there through the years, maybe The Great Spirit thinks an occasional rest is needed.

couple in photo on opposite page takes a light stroll over bridge in Jackson County Hurricane Shoals Park. Constructed of Southern yellow pine, the bridge spans the shoals of the Oconee River in an area once considered a holy forest by Creek and Cherokee Indians. No tribal warfare or hunting was allowed in the mystical forest. The restored grist mill, above, is a popular historical attraction at Hurricane Shoals Park. Southern yellow pine was used in restoration of the mill and numerous other improvements. The original mill was built in the 1870's when colonists formed the first settlement. Woodworker, at right, displays craft at Hurricane Shoals Park annual arts and crafts jamboree. Fruit bowl shown is made of layered padauk (an African wood).



Cogeneration Shows Increase In Drive To Cut Energy Costs

By Melinda Hogg

Unstable energy markets, the uncertainty of costs for conventional energy methods, as well as environmental concerns, continue to make wood energy an attractive alternate energy source for both residential and commercial sectors of Georgia. A major benefit derived from wood energy is its potential usage as a renewable fuel source for cogeneration.

Cogeneration is the simultaneous production of two forms of energy from one fuel source. In the process heat is captured that would normally be lost in the production of an alternate form of energy. The heat recovered is then used to generate the second form of energy. The use of this "waste" heat differentiates cogeneration from central station generation. The fuel efficiency of cogenerating plants is typically 70 to 80 percent.

In the early 1900s cogeneration supplied the majority of the U.S. power needs. Many manufacturing firms had their own power plants. These plants were powered by water, coal, or wood and supplied horsepower to drive the machinery. Electricity was also used to power motors and lights. As central power plants became more prevalent, cogeneration decreased. Statistics show that in 1978, 3.5 percent of the United State's power was cogenerated. Since that year, cogeneration has increased mainly due to facilities seeking alternate energy sources and the Public Utilities Regulatory Policy Act of 1978. This act requires the utility to pay the cogenerator at a rate which reflects the reduction of electric costs. This policy also guarantees the cogenerator backup service by the utility.

Cogeneration has emerged as a feasible option for many Georgia industries. As a renewable energy source, Georgia's forests can provide both thermal and electric energy.

Facilities with high thermal and electrical energy demands are the best candidates for cogeneration. In other words, textiles, hospitals, industrial plants, sawmills and other large industrial buildings.

Georgia's large forest industries continue to be the primary users of cogeneration. In fact, four percent of the electrical power used in Georgia comes from the process of cogeneration.

Through increased awareness, cogeneration in Georgia can be used not only as an important tool for helping to support Georgia's increasing energy demands, but

also for stimulating local economies, and increasing job opportunities within the state.

In fact, for every 2,000 tons of wood fuel chips used, one job is created within Georgia's economy. The timber industry, forest landowners, Georgia residents and other industries are deriving economical benefits which otherwise would be distributed to other areas from the use of imported fuel sources.

Georgia's industries are conducting business in very competitive markets and have ever increasing manufacturing costs. Cogeneration will allow them to reduce operating costs, become more competitive and continue to provide jobs, while using available energy sources more effectively.

Forest Farmer's New Edition Now Available

The 27th edition of the "Forest Farmer Manual" is now available to aid in making timber management and tax decisions that can mean the difference between success and failure. Published every two years by the Forest Farmers Association, the manual represents the collective efforts of authorities on timber taxation, forest management, computer technology and many other areas of interest to those who seek to enhance the value of their timberland holdings.

Association officials said persons who own timberland in the South will benefit from purchasing and using the manual, as timely and interesting articles by such noted experts as William K. Condrell, Washington timber tax attorney, Dr. Ronald F. Billings, forest entomologist and Frank Miller, landowner liability specialist and attorney are included.

The manual contains directories of local timber markets, forestry schools, forestry agencies, consulting foresters and industry sponsored landowner assistance programs in the South. It also contains timely and accurate information on costs of virtually every forestry practice in the South and updated charts on prices timberland owners received for their timber.

The 1989 edition of the "Forest Farmer Manual" is available to non-members for \$15, plus three dollars postage and handling, from Forest Farmers Association, Box 95385, Atlanta, GA 30347. (404) 325-2954.



Barbara Jones of Moultrie, state post chairman of the Georgia Garden Clubs, displays one of the hundreds of Smokey Bear Woodsy Owl posters entered by school students in the annual competition. Judges this year include Mary Perryman and Mel Lou Ryan of Moultrie, representing the clubs, and Forester Bill Lamp and Ranger Donald Bennett of the Commission. Winners will be announced and rewarded at the Garden Club's annual meeting later this year.

INFOSouth Offered

A complete reference library on natural resources and environmental concerns is now available to the public and is located at the University of Georgia Science Library in Athens.

INFOSouth, offered through the U.S. Forest Service, is an information service which specializes in providing materials on industry, business, government agencies, schools and groups requiring data on environment and natural resources.

Originally called "Southnet" when the service began in 1980, INFOSouth is part of a nationwide network of U.S. Forest Service libraries and information centers which share resources to provide clients with the widest possible network of materials.

Simonin Named Top Southern Tree Farm Inspector

Rick Simonin, area manager for Stone Container Corporation in Springfield, was recently named the American Forest Council's Southern Tree Farm Inspector of the year.

Simonin was selected for his overall service to the Tree Farm program during 1988. For two years he was a Superior inspector in Georgia, and has shown an enthusiasm for the program which has inspired others, according to the American Forest Council. In addition to the inspector's duties of inspections, certifications, and presentations, he promotes the program through newspaper articles and speaks to high school students about the importance of tree farming to the state.

"The Tree Farm program," says Simonin, is an excellent medium for professional foresters to communicate with private landowners. Through this interaction,

Biomass Meet Slated

The 1989 Southern Biomass Conference will be held September 12 through 14 at the Donaldson Brown Continuing Education Center, Virginia Polytechnic Institute and State University, Blacksburg, VA.

This rapidly growing conference deals with all forms of biomass resources, including forestry and agricultural crops and residues. Animal wastes, municipal solid wastes (MSW) and other organic wastes are also examined.

Technical, environmental, institutional, economic/marketing and information transfer aspects of biomass resources are covered from production through harvesting, handling, conversion and various end-use applications.

Presentations range from specific research papers to applied case studies and tours of several biomass-related projects will be a part of the conference. For additional information contact Dr. Dennis Eisma, Department of Mechanical Engineering at the school in Blacksburg, VA or (703)961-7595.

HOPE Project Begins

The Georgia-Pacific Corp., one of the nation's leading building supply firms, is bringing HOPE to students, low income families and faculty members alike in the southwest Atlanta area.

HOPE (Housing People Economically) is the brain-child of Georgia-Pacific board chairman, T. Marshall Hahn Jr., and will be concentrated in the Clark Atlanta University area of downtown Atlanta.

Georgia-Pacific, in an effort to promote private ownership and improve the urban environment around the college, will provide building materials at cost from the

(continued on pg. 19)

landowners benefit from increased forest management knowledge, industry benefits from increased timber production on privately owned land, and landowners realize their role in the continuance of our forest environment through the replenishment of our most valuable renewable resource."

Simonin is active in the Society of American Foresters and the Georgia Forestry Association.

(continued from pg. 9)

packages are then delivered to the individual stores with various other products from the distribution center.

Shirley, who feels he has now reached the point of being able to compete for these accounts, points out that this is a highly specialized area requiring appropriate time, money, and knowledge.

"For one thing, there are large inventory requirements," he explained. "An average trailer load is made up of 16 cords, so if a packager has an order of 10 loads, that's 160 full cords. If a packager can't meet the demands, he can go under in a hurry."

Another approach is to sell direct to concentrated markets such as condominium complexes, apartments and campgrounds. Shirley already is getting a foothold in the Atlanta condominium and apartment market and this is where he believes a great potential lies - if the market is properly serviced.

He believes the upper socioeconomic level of this market will eventually consider improved delivery service of home firewood not only as a luxury - but a prestige indicator. "But there are layers of resistance here," Shirley said. "Permission has to be obtained from the proper sources, then an image and service comparable to the market must be sustained."

This is where Shirley's innovative business talents really begin to show. Although he is reluctant to reveal details before services are firmly established, he has what seems to be some unusual and attractive approaches for servicing this segment of the "social wood" market.

But again, this segment has specialized problems, some of which overlap with the chain store problems. One such problem is the increasing sophistication of buyers. It is not unusual to see customers closely examining firewood packages to make sure they are not buying a lot of air in a sloppily packaged bundle. Wood species and proper drying are also considerations.

Shirley believes his operation excels in this area. He strives for tightly packaged bundles that are as solid as possible. He seeks assembly line packagers capable of fitting the jigsaw puzzle pieces together. His company uses white oak, red oak, hickory and chestnut oak - all good fire-

wood species. He also participates in local FFA forestry classes, and earned that group's outstanding service plaque. As a Project Learning Tree facilitator, Simonin was selected to participate in the Georgia Conservancy's Youth Conference and in the Teachers, Environment and Technology Institute at Georgia Southern College. He received a BS in Forestry from Auburn University.

wood species.

As for drying the wood, there are several possibilities, including drying by kiln, solar pad, and microwave. Shirley relies on what most people consider the most economical means - sun and wind. Although it takes longer for nature to season firewood, the results are the same.

One thing is certain, there is a growing market for packaged firewood and fuelwood (wood suitable for heating that is not packaged). A 1981 study estimated that 42 million cords of firewood were used to heat American homes; the study also estimated that one out of four homes were using some firewood for heating. Since 1981, the use of residential fuelwood has been increasing by approximately 10 percent a year.

Of course, many of these users cut their own firewood - for a while. But it doesn't take a research study to determine that a significant number of these woodcutters get tired of this and will gladly buy packaged firewood if it is good quality and reasonably priced. This is especially true of urban residents. The benefits of packaged firewood to them are numerous - not the least of which is the fact that the wood can be placed outside without getting wet or being frozen to the ground.

And so what of Dan Shirley and his operation? He is relatively small and expects more competitors as the market for packaged firewood increases. His company consists only of himself, a plant manager and a crew of a half dozen workers. But he has resources that are ready and waiting, mechanical improvements in processing that are operating now, and innovative approaches to a sophisticated market segment that are in the works.

He foresees increasing competition and legal regulations as the market increases. He even sees the future possibility of some operations running the entire gamut - from harvesting to merchandising.

"But right now I'm just going with what I've got," Shirley said. "So far it's been a lot of work and a little profit, but I've enjoyed every minute of it. I think we'll be around for a long time, because I don't know of anybody doing it just the way we're doing it with our specific objectives."

Georgia Forestry/Spring 1989/17

Fendig Named New Member Of GFC Board

James Fendig, woodlands division general manager of Union Camp Corporation, Savannah, has been named to the Board of Commissioners of the Georgia Forestry Commission by Governor Joe Frank Harris.

The new board member, a Brunswick native, graduated from the University of Georgia in 1958 with a degree in forestry, and brings to his new position 30 years of professional forestry experience.

Fendig has served as timber marker/cruiser and is experienced in all phases of management in the fields of wood procurement, building production and game/land management.

He worked for the Gilman Paper Company of St. Mary's from 1958 to 1979, where he was woodland manager, and served as Southwest Forest Industry's vice president and general manager of the Southeastern woodlands division from 1979 to 1987. In 1987, Fendig accepted his current position with Union Camp as the woodlands division general manager.

Fendig is past president of the Florida Forestry Association, past vice president of Georgia Forestry Association and past chairman of the Region Eight Timber Purchasers Council.

He is on the board of directors of the Georgia Forestry Association and Southern Forest World.

He is an elder in the Skidaway-Island Presbyterian Church and a member of the board of directors of the Springfield Commercial Bank.

Fendig and his wife, Ann, have two grown children.

Fendig succeeds Eley Frazer III of Albany, who served two seven-year terms on the board.



Fendig

Knots Become Beautiful Birds In Hands Of Hazlehurst Man

By Rita Nail

The lightwood knot, sometimes called "lightered" knot, has played a vital role in the history of rural Georgia. It was used to keep our early settlers warm, as well as to provide their light at night--firelight if inside, a torch if outside. However, with the introduction of electricity into rural areas, the lightwood knot soon lost its usefulness and became a forgotten remnant of our pioneer heritage.

Forgotten by most, that is--but not by L. W. Spell of Hazlehurst. Spell has found a new and interesting use for the lightwood knot. With a remarkable skill in woodcarving, he turns these gnarled pieces of crystallized wood into rare and beautiful birds of many sizes, shapes, and colors.

Although birds are a favorite subject for woodcarving enthusiasts all over the country, Spell's birds are uniquely different. They cannot be duplicated. He uses no patterns or drawings, but works only from his imagination. He says he is often surprised at the results. His tools are simple--a tablesaw and a carving knife.

"Sandpaper can't be used," Spell says. "It just gums up. My hands and tools get so sticky I have to wash them in mineral spirits.

"It amazes me when I'm carving on lightwood knots at the various colors and shades that come out. Some of the birds turn out with green tints and some with red tints. There is great color variation."

He said there are also many rings in lightwood and some of the birds "take on eyes, feathers," and other natural features. "As I carve," Spell continued, "each bird seems to take on its own personality."

How did Spell come upon such a unique hobby?

Impressive Collections

"Well, actually I've been carving birds since 1984," Spell says. And he has an impressive collection of birds carved from tupelo to prove his extraordinary carving skills. But it was just a little over a year ago that Spell began carving birds from lightwood knots.

"I was down on Satilla Creek just looking around and enjoying the scenery," Spell recalls. "It was a dry time and I could see several nice lightwood knots laying about in the dried creek bed. I picked up one and was thinking about what an important part

lightwood knots had played in my life as a boy growing up on the farm, and while gazing at the knot, I visualized a bird in there. I decided to take it home and see if I could carve that bird. I tried it, and it turned out."

Since that time Spell has turned out more than 50 of these unusual birds.

Lightwood knots come from stumps of fallen pines or when 'peg knot' limbs break off pine trees and fall to the ground. The knots are so rich in resins that they become crystallized and are preserved for centuries.

When our early settlers came to Georgia they found huge forests of pine timber. They cut down trees to use in constructing the simple log cabins, and to clear the land for farming. The toil of digging out the stumps from the fallen pines became the pioneer family's most back-breaking chore. It took many hours of digging to clear even a tiny garden plot. After the stump was removed, the outgrowing roots were dug out piece by piece and carried to the woodpile for burning. Many of the smaller roots were left buried in the earth, only to be uncovered through years of plowing the fields or through the process of land erosion.

It is these knots that Spell is searching for when he tramps the woods and pastures on weekends. He says that knots suitable for carving birds are hard to find.

"Dried creek beds are the best place to look. Some of the best knots are buried in the ground. Sometimes I find them in pastures where the hogs have rooted them up, or on country roads where they have been pushed to the surface by road grading equipment."

Decorated Home

Spell now owns and lives on the farm adjoining his boyhood home. Mary, an enthusiastic supporter of her husband's hobby, has tastefully decorated their lovely country home with Spell's many birds.

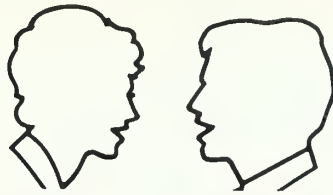
Spell says one of the interesting aspects of carving birds from lightwood knots is the time variation.

"I have carved a bird in two hours," he says, "while on others I have had to spend several days. Some of the knots are pliable and some are very hard and brittle."

Spell thinks this might have to do with the age of the knot, but he's not sure. He does get into the technical properties of lightwood knots.

"God created the knot," Spell says, "and I carved the bird."

PEOPLE



In The News

Appreciation Awards Given To 17 Mayors

Seventeen Georgia cities were recently honored by the Governor and the Georgia Forestry Commission in the "Tree City USA" program.

"Tree City USA" is designed to recognize communities effectively administering their tree resources. It is also geared to encourage a management program based on "Tree City USA" standards. This is done with the assistance of state foresters and the National Association of State Foresters.

The mayors of the cities were awarded plaques provided by the Forestry Commission and presented by Gov. Joe Frank Harris in a ceremony at his office.

The recipients of the "Tree City USA" honor were: Larry Bays, Albany; Vicki Chastain, Marietta; Bobby Cheek, Clarkesville; Buddy DeLoach, Hinesville; Charles A. DeVaney, Augusta; David Gallegly, Trenton; James E. Jernigan, Columbus; Charles Kersey, Thomaston; John Lawson, Avondale Estates; Ernest Moore, Gainesville; E. B. Pope, Washington; James H. Rainwater, Valdosta; Lee Robinson, Macon; John P. Rousakis, Savannah; Steve Taylor, Metter; Bobby Williams, Duluth; and Andrew Young, Atlanta.

(continued from pg. 17)

company for faculty renovations.

Hahn feels that through home ownership one can develop a sense of pride in keeping up the property and even improving the overall environment of southwest Atlanta.

"We've been turning our minds to some sort of approach that would be of a big enough scale to make a difference, and perhaps effective enough to serve as a pilot on a national basis so that we can encourage similar developments in other parts of the country," Hahn said.

As Georgia-Pacific made its announcement to enhance the Clark Atlanta University campus, other projects were already in the works to improve the area. For instance, the school-sponsored renovation of the Ware-Bumstead dormitories and faculty homes and the government-sponsored renovation of University Homes which comprise the neighborhood.

Thomas O. Cordy, co-chairman of the school's trustees, expressed regrets that the community had allowed the deterioration of the neighborhood and said he is grateful for Georgia-Pacific's help and interest.

"Georgia-Pacific's help is an important catalyst to the revitalization of the community surrounding the university center. It is encouraging that corporate Atlanta is interested enough to assist us," Cordy said.

ERNEST KERSEY, who came with the Commission in 1970 as a forest patrolman, is now ranger of the Jeff Davis Unit, with offices in Hazlehurst. The ranger and his wife, the former Miss Brenda Carter, are members of the Oakgrove Baptist Church, where Kersey serves as deacon. The couple has two children, Ann and Jala...T. M. "MORT" EWING, prominent Newton County farmer, was elected president of the Georgia Farm Bureau at the annual Skylk Island meeting. Ewing replaced



Vinson



Hogg

Baldwin College in Tifton and has a background in forestry, real estate sales and appraisal training...JOEL VINSON, Monroe County, was named Georgia's Conservationist of the Year at the Lakewood Exhibit Center in Atlanta. Vinson is a consultant forester and is active in conservation and natural resource management in the Middle Georgia area. A 1977 graduate of the University of Georgia School of Forest Resources and a 1981 graduate of the John Marshall Law School, Vinson was presented with the award for outstanding overall conservation effort and achieve-



Vankus



Kavanaugh

ment...Forester MELINDA HOGG, wood energy coordinator, left the Research Department at the end of January to join her husband who had been recently transferred to Brunswick by the Georgia-Pacific Corp. Melinda joined the Commission in May of 1985 as an urban forester. She had worked in Macon since February of 1987 as a wood energy coordinator... Botanist VICTOR VANKUS, a native of Park Forest, IL. and a graduate of Eastern Illinois University, is now affiliated with the National Tree Seed Laboratory at the Georgia Forestry Center...WARREN KAVANAUGH, who came with the Commission in 1972, is now ranger of the Dougherty County Unit. He previously served as ranger of the Baker-Mitchell Unit, but accepted a senior patrolman position in order to transfer to his hometown of Albany. The ranger and his wife, Susan, have two children. The family is active in the First United Methodist Church of Albany.



Kersey



Ewing

Robert L. Nash, who was president for 10 years. Ewing has also served on the American Farm Bureau Dairy Advisory Committee, and until 1973, owned and operated a dairy farm. Since that time, Ewing has operated a 400-acre commercial dairy, small grains, beef cattle farm near



Johnson



Frazer

Livington...Forester RICHARD JOHNSON, formerly assigned to the Coffee County Unit, is now heading the Glynn County Unit. A graduate of the University of Kentucky with a degree in forestry, Johnson came with the Commission in 1982, after working in a forestry capacity in Louisiana for four years. The forester and his wife, Pamela, and their two daughters, are active in the United Methodist Church... DAN FRAZER, 35, has been named manager of real estate sales for Georgia Forestry Services, Inc., Albany. Frazer is in charge of the firm's operations in forestry and agriculture land sales in Georgia and the Southeast. He attended the University of Florida at Gainesville and

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FORESTRY

Summer, 1989

**Charlie Parker Named
Tree Farmer Of Year**

**New Forest Industries
Locate In State**

**Open Range Problems
In Forestry Remembered**

RECEIVED
JUN 16 1992



Another old turn-of-the-century house is being demolished and some passers by on a Waycross street slowed down to observe the type materials and the kind of workmanship that went into the building that has weathered the storms of so many seasons.

Now that the wrecking crew has stripped off the siding, the exposed wall studs present an interesting construction feature. The two-by-fours are an incredible 24 feet in length and extend from the foundation to the top plate of the second story. It is, of course, lumber cut from a virgin forest. Modern studs are usually only eight feet long.

Typical of homes of its era, wood lathes were used on the interior walls as a foundation for plaster. Solid eight-by-eight wood floor sills the length of the structure supported the building.

A plastic bucket amid the debris in the right foreground is the only reminder that this house existed in the age of sheetrock, plywood, and aluminum siding.

ON THE COVER - A placid mountain lake surrounded by the dense greenery of oak and pine and sweetgum presents a soothing picture postcard kind of scene for the traveler in North Georgia. (Photographed near Helen by Bill Edwards).
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Charlie Parker stands at entrance to his well managed forestland, a tree farm that has been judged one of the finest in the state.

LONG COUNTY LANDOWNER NAMED STATE'S TREE FARMER OF THE YEAR

Charlie A. Parker of Jesup learned of the Tree Farmer of the Year competition while attending a forum five years ago and on that very day set his goal to achieve the title.

He sought the advice of professional foresters and began to do all the right things to transform 544 Long County acres into a highly productive showpiece tree farm. When the Tree Farm Selection Committee came around this spring to compare Parker's farm with others in the running, the inspectors were thoroughly impressed with the progress he had made.

The word came within a few days that the industrious Charlie Parker, who shares ownership and management of the land with his brother, Dan,

was indeed Georgia's new Tree Farmer of the Year.

Parker, a native of Long County and a graduate of Brewton Parker College, lives in Jesup and is a supervisor in shipping at the local ITT-Rayonier Corporation plant.

His interest in forestry dates back to his childhood when his father, the late W. H. Parker, served as the first forest ranger in Long County. The youth was also active in 4-H and FFA forest projects at his school and remembers "gathering and selling pine cones for 75 cents a bushel to the Georgia Forestry Commission nursery" to earn extra money.

Parker and his brothers, Dan and Billy, and sister Sarah, grew up on the farm near Ludowici. He said "Daddy

was a worker and my mother was a pusher and they kept us busy." He recalls that on many wintry days, he and his brothers planted pine seedlings in vacant spots in the woods.

Years later, Charlie II, his own son, became well acquainted with a dibble, as well as a rough-riding mechanical tree planter. He began planting when he was 13-years-old. When he comes home from the University of Georgia he enjoys visiting the tree farm and "he once told me how much the trees mean to him because he had a part in planting them," his father related.

Although Parker's brother, Dan, also a graduate of Brewton Parker College and now vice president of an executive search organization in Atlanta, is far removed from the tree farm on U.S. Highway 301 in Long County, he spends many weekends and holidays working on the land.

The brothers' forested lands consists of 388 acres that made up the family home place and an additional 156 acres that were purchased. They also bought out the interests of other family members. There were several shallow ponds on the property and one and a half miles of drainage ditches were dug before all the area could be successfully planted. About five miles of all-weather roads were built in the early stages of establishing the tree farm.

"We planted seedlings in driving rain that first day," Parker said. "We were just getting the tree farm started and we were eager to get the seedlings in the ground while they were fresh from the nursery." Today, motorists whizzing along the highway, see those trees as an attractive, rapidly maturing forest.

In regard to older tracts of their land, Parker said "we always hire our cousins, Eddie and Jeffrey Dasher, for selective cutting." He said they are experts in properly removing chip and saw material, pulpwood, sawlogs and poles from the woods without damaging the site.

When harvesting calls for clear cutting, Parker said he receives bids from area logging contractors "and that's when the price can vary as much as 40 percent." Most of the pines on the property are slash and there are about 40 acres of mature hardwood.

One interesting innovation on the farm is the fertilization of about 60 acres of pine. "We hired high school kids to hand drop fertilizer on each

FLINT RIVER NURSERY LOCATION IS ATTRIBUTED TO TREE FARMER

By Johnny Branam



Few timber growers would go as far as Parker has in erecting attractive markers to denote the gateways and the corners of his property.

hill," Parker said. "We used about 300 pounds of 18-46-2 per acre." The brothers also plant food plots for deer and scatter shelled corn in the woods for wild turkey to provide good game hunting for family and friends.

Parker pointed out that his family is "forestry oriented" in many ways: His brother, Billy, also works for ITT Rayonier; his wife, Linda, a registered nurse, takes a great interest in the tree growing enterprise; and daughter, Charla, a student at Georgia College, is the reigning Miss Wayne County Forestry.

Parker usually speaks optimistically about tree farming, but said he is alarmed over the new capital gains tax reform that is making it a far less profitable venture. Although he now considers it "a marginal business" under present tax laws, he said he is hopeful that Georgia's representatives in Congress can help restore some advantages.

Charlie Parker will stand before a throng of forest landowners, forest industrialists, foresters and others with forest interests and their wives at the annual convention of the Georgia Forestry Association on Jekyll Island June 12 to receive a plaque that will officially declare him Georgia's Tree Farmer of the Year, a distinction his many friends will say he richly deserves.

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Fred Moore is the one individual who is most responsible for the Commission's Flint River Nursery being where it is today. This recent addition is one of the Commission's most vital links in sustaining forestry as Georgia's number one money industry -- an \$8.7 billion industry that employs more than 80,000 Georgians.

David Westmoreland, the Commission's assistant to the director who coordinated the search for property and eventual establishment of the Flint River Nursery said, "There was never any doubt from the time Mr. Moore got involved that the state would have its preferred nursery site in Dooly County."

Westmoreland explained that at one point during efforts to establish the nursery on the highly desirable Dooly County site, legal ramifications and speculative interests made it seem that a nursery on this site was "all but impossible."

However, it was at this stage that Moore decided to purchase the entire 3,000 acre tract under consideration - this included the 625 acres that are now the site of the Flint River Nursery. Moore then sold the 625 acre nursery site to the Commission - free of previous complications.

"Mr. Moore was just as interested in seeing Flint River Nursery become a reality on this site as the Georgia Forestry Commission," Westmoreland said. "And thanks to Mr. Moore, this is exactly what happened."

Decisive action and a talent for envisioning future developments are typical of Fred Moore. The Dooly County tree farmer has worked in some form of forestry all his life, and is still active in numerous forestry related pursuits - including his essential role in the Commission's acquisition of land for the Flint River Nursery.

But in spite of a lifetime of impressive forestry related accomplishments, it all started with a billy goat and baling wire dragging willow branches. As Fred Moore reflects back over a career of logging, sawmilling, land clearing

and reclaiming, the twinkle in his eye gives the impression that it has all been a game - a game in which hard work, ingenuity and the courage to do things differently have paid off.

The Moore family business was built around the railroad industry, but started with a shingle mill making pine and



Fred Moore

cypress shingles. The sawmill was established in 1935 to cut bridge timbers, ties and lumber for railroads. Moore became logging foreman for his father when he returned from the service. The business cut logs, pulpwood, and operated the sawmill. Moore remembers cutting 12" x 20" x 40' timbers; this required a log more than 40 feet long and 16" on the small end.

About 10 years ago, at an age when most people start thinking about retirement, Moore began an intensive management program on his land. His plan deserves study by all forest landowners. Although most land-

(continued on pg. 1)

PERRY WINS STATE FFA FORESTRY MEET

The elite of Georgia's FFA high school chapters merged at the Commission headquarters in Macon for some of the keenest competition in forestry skills ever experienced during state finals. These chapters were represented by students throughout the state who had won first and second place honors at the regional level during a series of meets preceding the finals.

Competing chapters tested their skills in events including: tree identification, land measurement, selective marking, ocular estimation, forest management and standing pulpwood estimation. More than 200 of the state's high school students participated in the competition.

Perry High School, directed by advisors Argene Claxton and Tim Lewis, won first place honors. Louisville High School, directed by Robert McGill, took second place honors.

Schools participating included Crisp County High School, Miller County High School, Early County High School, Echols County High School, Clinch County High School, Harlem High School, West Laurens High School, E.C.I., Bleckley County High School, Pierce County High School, Charlton County High School, Harris County High School, Paulding County High School, Putnam County High School, Oconee County High School, Gilmer County High School and Murray County High School.



The Perry High School FFA Chapter won first place in the state finals of the FFA Forestry Field Day. Front row (left to right): Jack Waid, Paul Spears, Darrell Passinault, Stoney Lee Pitzer, Buddy Chaney and Randy Moss. Back row (left to right): Argene Claxton (advisor), Terry Presnal, Grady Shirey, Allen Germundsen, Karl Everidge, Craig Pate and Tim Lewis (advisor).



Second Place honors in the Field Day competition went to Louisville High School. Front row (left to right): Larry McGraw, Michael Young, Adam McNeeley, Eric Raskin, Jamie Wheeler and Donnell James. Back row (left to right): Robert McGill (advisor) Alan Logue, Alan Davis, Hayden Hutchison, Chris Gordy and Andy Borders.





- **1953 Legislation Ended "Greening Up" Practice**

CLOSED RANGE WAS MILESTONE FOR FORESTRY

By Chiquita Johnson

When was the last time you saw horses, cattle, goats, pigs, or sheep roaming the highways and by-ways of Georgia? If you're a baby boomer, the whole idea seems rather peculiar. But if you're a little older, and a lot wiser, 1953 was the last time you saw the open range in Georgia.

The "open range," as it was previously called, permitted animals of the porcine, bovine, and equine class to wander freely at will. Instead of fencing animals into pastures, the owner's fields and homesites were fenced.

With the passage of the closed range legislation in 1953, farmers could not continue to burn the Georgia woodlands for easier turpentine or for "greening up" forage for their livestock. Legislators could no longer ignore the damage indiscriminate burning was doing to Georgia forests; valuable research had paved the way for greater utilization of Georgia pine.

"Cattle roamed everywhere, especially in southeastern Georgia where farmers had 50 to 100 acres and up

to 1,000 cows that ran on everyone's land," said former Georgia Forestry Commission Director Ray Shirley. According to Jerry Lanier, Statesboro district forester, "You had to fence your property instead of the livestock, and it was right backward."

Meantime, Paul Butts, utilization forester, remembered how bothersome it was during the open range years to enter fenced property.

"Coming into someone's yard involved either going over cattle gaps or getting in and out to close a gate before driving on," he said.

Inconvenience was not the only problem with the open range; danger was also an integral part of daily life.

"Cows were fond of lying on paved roads because of the warmth, and it was always frightening at night to come over a hill and discover a bunch of cows in the road," Butts said. "If the driver could not stop and ran over one of them, he was liable for damages. Today, the landowner is liable to the driver."

This anecdote relates only some of the peril of the open range. The open range encouraged indiscriminate burning which would "green up" the woods and promote early growth of wiregrass as sustenance for the livestock.

The prominent turpentine and naval store industry in south Georgia also promoted the burning practice. With diminished woodlands, dragging a gum bucket through the woods was made easier and a woods rider could keep up with the chippers and dippers.

"There were only two places where the cow was more sacred than human life: India and South Georgia."

Local people in the pinebelt also believed that burning the forests killed a great number of the ticks, boll weevils, mosquitoes and rattlesnakes that continually plagued them.

Indiscriminate burning, however, was also a menace to forestry, in that the growth of young trees was discouraged and what the fire did not kill, the "piney woods rooter," (long-headed, long-legged, fleet-footed wild hogs) did, Butts said.

According to Dr. Carl Hoveland of UGA's Agronomy Department, there were other problems with the open range system.

"There was the cost of fencing, the large amount of creage used to feed one animal, and the poor quality of the food for the animals. It was also difficult to control breeding of animals. After calving, it was hard to find your calves," he said.

This led to very low productivity due to a low calving percentage and poor animal growth, Hoveland said.

"We are much better off with a smaller amount of improved pasture and leaving the forest for forest production," he added.

In the January-February 1953 session of the Georgia General Assembly, Act 381, House Bill 76 was passed, prohibiting livestock from running at large or straying on public roads."

Finally, the state had found it necessary to pass a livestock law that uniformly embraced all public roads and other property in Georgia.

As president of the Georgia Farm Bureau at the time, attorney William Lanier developed the concept of a fenced range. It was an idea whose time had come but was a "battle royale" in getting this legislation passed, he said.

Lanier was also concerned with the open range's detrimental effect on forestry and livestock production.

"There were only two places where the cow was more sacred than human life: India and south Georgia," he said.

The original bill called for a referendum and it failed, so it was picked up in the next general election, and kept putting it through until it passed, and there

was no resistance after a while," Lanier said.

The act amended in the November-December session of the Assembly, was slowly putting to an end a practice that had continued since the early settlement of Georgia, said Dr. Miller.

It stated that no owner could permit livestock to run at large or stray on public roads or property that did not belong to him, except by permission of the owner of the property.

The punishment for infractions of the act was also made clear: "Any owner of livestock who unlawfully, intentionally, or knowingly permits the same to run at large or stray upon the public roads of this State or any person who shall release livestock after being impounded, without authority of the impounder, shall be guilty of a misdemeanor and shall be punished by imprisonment in the county jail not exceeding six months, or by a fine exceeding \$500, or by both such fine and imprisonment."

The law established an inference of the owner's negligence from livestock roaming freely and liability for injury to the livestock. It stated, "Livestock running at large on a public road are trespassers, and a motorist is liable only for willful and wanton negligence in injuring the animal."

Willard Range, in "A Century of Georgia Agriculture: 1850-1950" once stated, "Slovenly and destructive practices in agriculture were visible on all sides of the South...a general disrespect for all grass almost everywhere, with utter disregard for its value to the soil and stock..." In short, Range painted a dismal picture of Georgia's agricultural attempts and of its farmers, seemingly the open range would fit heartily into his characterization.

But this is not the case, the people of Georgia have grown with the state and the open range was a period of the learning and growing process that has led to a new and better Georgia-the modern Georgia.



They are not as common as they were years ago, but cattle gaps are still found in rural Georgia. This device in Irwin County is typical of gaps farmers use in lieu of a gate to keep livestock fenced in.

SUCCESS WITH CEDAR

ENTERPRISING LAMAR COUNTIAN CREATES NEW, PROFITABLE PRODUCTS FROM GEORGIA'S RED CEDARS

By Howard Bennett

James Shirley was a beekeeper producing more than 20,000 pounds of honey annually when the business became too competitive to bring a decent profit; that's when he took a closer look at cedars that grow randomly along Lamar County fence rows and country lanes and came up with a great idea.

He located a 100-year-old sawmill under a tangle of kudzu vines near Conyers, hauled the rusty equipment to his property on Ennis Road near Barnesville and soon had the big circular saw slicing red cedar logs into attractive planks - planks that would become paneling, mantels, bannister rails and other decorative products.

Shirley admits, however, that he "threw away about \$10,000 worth of material" before his wife, Betty, made an excellent suggestion that pointed their fledgling company in a different direction. She suggested that they market the cedar shavings.

Today, Cedar Farms produces and wholesales neatly packaged aromatic cedar shavings to one of the nation's largest department store chains. A shaving mill and packaging plant was installed up the hill from the sawmill at the farm and now all cedar that cannot be made into a sound plank ends up as shavings that consumers across the country are using in dog, hamster and guinea pig pens and for other purposes.

Shirley said he is currently test marketing another product that will probably be sold nationally. It is a

James Shirley shows a load of cedar cants to Forest Ranger Homer Bennett of the Lamar-Pike-Spalding County Unit. Cants (squared logs) of this size in cedar are scarce. Shirley combs the countryside for sizeable cedars, but he must venture further and further from his mill to find quality trees.



finely ground cedar sawdust in a one-pound cellophane package to be used as an air freshener when immersed in hot water or heated briefly in a microwave oven. "Cedar is nature's own deodorizer," Shirley explained. "I believe this is a product the public will buy once it is tried."

Natural Beauty Shown

Aside from the practical application of Georgia's cedar, the species has a natural beauty that any visitor can fully appreciate by stepping into Shirley's spacious home. Walls are paneled in rich red cedar, stairway bannisters are made from the wood and a highly polished cedar bar in the playroom shows off the wood to its greatest advantage.

Shirley said he built the house from lumber cut on his sawmill. Pine was used for framing, with choice cedar used on much of the interior.

"I still cut some pine at the mill," said Shirley, who often works in the mill although he has several employees, "but sawing pine is the same thing log after log." He says he enjoys cutting red cedar, however, "because you never find two pieces that look alike ...every plank has natural beauty."

Cedar is not as plentiful, of course, as pine and some other trees in Georgia and Shirley must often search for timber to keep his log yard well stocked.

Search For Cedar

On rainy days or when the mill is down for some reason, Shirley and his son, Jason, 14, often go out looking for cedar. "We ride the back roads and when we see good trees we try to make a deal with the owner," he said. Trees have to be purchased from as far away as 60 miles from the mill and "we could even go further if necessary," Shirley said. He plans to plant some cedar seedlings from the Commission nurseries next year, acknowledging that his son and daughter, Rhonda, 18, might be the true beneficiaries of the now growing trees.

Now and then Shirley will come across free timber. "Utility companies are always clearing their lines and when they have to cut cedars they call me and I pick them up," he said. Mature cedars are also found around abandoned home places in the county, where they were apparently planted many years ago as shade or ornamental trees.



Shirley displays a bag of cedar shaving for Ranger Bennett as they stand in a highway van that is almost loaded. The aromatic shavings from Cedar Farms are sold to a large department store chain and eventually wind up in pet cages. Shavings are one of several products marketed by the farm.

Although he had never engaged in logging or mill operation before moving to rural Lamar County from the Atlanta area, Shirley is quite knowledgeable about the characteristics of the cedar tree. He said he has read and

studied considerable material on the species and has also gained valuable information by conferring with the Forestry Commission.

Cedar Farms is believed to be the only enterprise in the state that is currently manufacturing products almost exclusively from cedar. In the early part of this century, a thriving pencil factory in Marietta used Eastern Red Cedar (*Juniperus Virginiana*) but suspended operations when the supply of quality cedar in the area was exhausted.

Shirley still maintains a dozen or more bee hives at Cedar Farms, but he has definitely found that there is more profit and a greater satisfaction in red cedar than there is in golden honey.

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Aerial view of huge McMillan Bloedel plant now under construction in Madison County. Plant on opposite page is being constructed in Jackson County by the J. M. Huber Corporation.

LARGE FOREST INDUSTRIES LOCATE IN STATE

A group of forest landowners and others interested in forestry gathered in the cafeteria of Madison County High School in Danielsville on a recent night to hear discussions on new industries that will pump millions of dollars into Georgia's economy through payrolls and timber sales.

Several new wood-using industries, which are now in various stages of construction, and planned expansions of existing facilities, represents an expenditure of more than a billion dollars.

The enthusiastic audience at Danielsville heard Dave Christopher, McMillan Bloedel procurement manager, tell that his company is the largest producer of forest products in Canada and one of the largest in the U. S., with 15,000 employees. The good news is that the company is completing a massive \$60 million manufacturing plant in the little town of Colbert.

He said the plant, to be operational this fall, will have 220,000 square feet under one roof. The company will manufacture Parallam, an engineered structural beam made of wood which

***"This Great Surge
In New Industry
And Expanding
Forest-Related
Industries
Underscores The
Importance Of
Forestry
In Our State."***

permits longer spans and higher loads. Wood will be purchased from surrounding landowners.

Other new plants include Lang-board, Incorporated, a \$20 million facility in Brooks County that is now operational and is utilizing hardwood to manufacture oriented strandboard.

The product, known in the trade as OSB, will also be produced in a \$50 million plant now being established in Jackson County by the J. M. Huber Corporation. Louisiana Pacific is building an OSB plant in Jackson County at a cost of \$25 million and International Paper Company has announced plans to manufacture the product in a \$40 million facility to be built in Crisp County.

OSB is a reconstituted structural wood panel having strength characteristics similar to plywood. Production of OSB involves narrow strands of wood being cut from whole trees, dried, mixed with exterior glues and then pressed under high heat and pressure. OSB panels are used widely in construction and in remodeling and repair applications. Use of this wood product is expected to increase dramatically throughout North America in the future, an industry spokesman said.

Pine, sweetgum and yellow poplar will be used at the new Huber facility, thus creating a new market for forest landowners in Jackson and surrounding counties. It is estimated that 250 million

square feet of OSB panels will be produced annually by the plant. The Huber Corporation is a privately held firm with interests in several manufacturing fields.

Union Camp Corporation is currently spending \$375 million in restructuring its Savannah plant and Federal Paper Company announced a \$400 million expansion of its Augusta facility. Other pulp and paper mills, lumber manufacturers and related industries have announced expansion plans during the past two years.

John Mixon, director of the Georgia Forestry Commission, said "this great surge in new and expanding forest-related industries underscores the importance of forestry in our state and places a new emphasis on our need to keep reforestation at an all time high."

He said the new industries will add more than 1,000 jobs to the more than 80,000 already attributed to forestry enterprises and will mean that many landowners will not only have new markets for their wood, but will be able to sell raw forest material that was once considered low grade and unsaleable.

Mixon praised the state's Department of Industry and Trade for convincing the new industries to locate in Georgia, acknowledging that luring industry is a highly competitive business among the states. "We are grateful to the department for its fine work," he said, "and now it's our job to convince the landowner to replant every acre of timber that is harvested to assure industry of a continuous supply of raw material."

Two foresters are credited with mak-



John Wells, left, and Jim Ewing show samples of products to be manufactured by new industries in Georgia.

ing major contributions in the promotion of new forest-related industries in the state and the export of forest products, according to John Mixon, Commission director.

Jim Ewing, a graduate of the School of Forest Resources, University of Georgia, came with the Commission in 1977 and served in several posts prior to his assignment to the Georgia Depart-

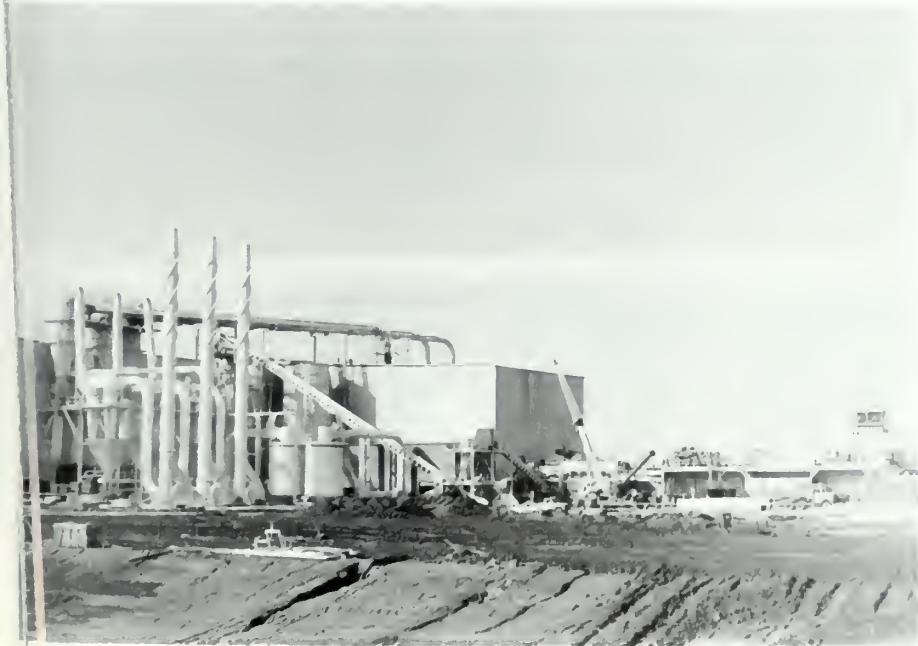
ment of Industry and Trade to aid in the promotion of forest-related industry. He first served under a contract with the department, but later transferred to that agency and is now Director of Project I.

Ewing worked closely with all the industries mentioned on these pages and is in contact with other prospective industrial newcomers to the state.

John Wells, also a graduate of the School of Forest Resources, UGA, came with the Commission in 1985 and served as an urban forester before transferring to the research department. In 1986, he was assigned to the post vacated by Ewing.

In working under contract with the Department of Industry and Trade, Wells' main thrust is to promote exportation of forest materials and products, but he is also involved in strengthening the domestic market. One of his most recent successes in the export trade was helping a Wilkes County log building manufacturer market his product in Japan.

Both Ewing and Wells are based in Atlanta, but travel extensively in this country and abroad in their work.



FORESTRY AND LAND-USE FIELD DAY TO ENTERTAIN AND EDUCATE

By Paige Hays

County fairs and field days stir similar memories of cake walks and egg tossing contests. Usually the principal or some other worthy dignitary, like the coach, sat in a booth waiting for a lucky arm to send him careening into the cold water below. Field days are fun.

The day's booty was often a goldfish swimming in a plastic bag that rarely survived the trip home. They aren't giving away guppies, and there is no Moon Walk at the Georgia Experiment Station, but you won't want to miss the second Land-Use and Forest Management Field Day on September 27. You are likely to take home a more enduring prize than suffocating fish. And when was the last time you wore boots to a management seminar?

The field day aims to help landowners in Georgia get a better return on their land by improved management of their resources. A multitude of techniques to promote integrated land-use for various types of soil and topography will be discussed.

Experts from across the state will speak at demonstration sites so you can see these techniques implemented. If you've got your boots on, you may be enlisted to participate in some of the management activities. It's no cause for alarm - fire fighting is not on the list, and you won't get roped into a three-legged race against you will.

The field day "events" follow.

Vegetation Control displays economical ways to convert mixed woodlands to pine with safe chemical renovation.

Prescribed Burning will cover the proper ways to execute a successful burn as a silvicultural tool.

The **Wildlife Management** site will demonstrate how to attract small game and waterfowl while you manage for timber production. Lucrative hunting leases are making this popular with a growing number of landowners.

The **Southern Pine Beetle** has caused the loss of many acres of pine throughout Georgia. This will be a question and answer session on

the beetle and other common insects and diseases that affect timber production.

Low-Cost Regeneration shows landowners how natural regeneration can reforest land without a hefty per acre investment for planting.

Thinning Practices gives tips on insuring good logging practices during a thinning to protect your final harvest.

Selling Your Timber consists of advice on working with consultants and buyers and also covers common contract stipulation.

Hardwood Management deals with the growing market for hardwood products in Georgia and how to manage your current inventory.

Pond Renovation shows how a dying pond was renovated into a catfish farm.

Homesites in Wooded Areas will give guidelines for building in the woods without destroying the natural habitat that attracted you in the first place.

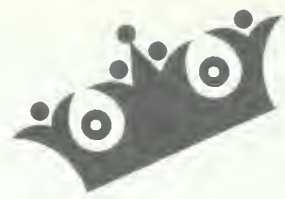
Managing Your Pine Stands for Straw Production is an easy way to supplement your income while your timber grows. This new industry brought in over \$10 million last year.

The **Pine Plantation Establishment** site will relate different levels of timber production to the amount spent establishing each site. This should help landowners project the investment required to achieve the production they desire.

Tax and Estate Planning is needed whenever money is spent or made. Chances are you do both. These speakers will reveal how timely expenditures can save more than a few pretty pennies.

The **Best Management Practices and Road Construction** could drastically cut erosion rates on your land after a logging operation. After all, how can you manage your land if it is washing downstream? Over 80 percent of the sediment polluting Georgia's waterways comes from logging roads and skid trails.

(continued on pg. 19)



FIFTY COUNTIES SEND CONTESTANTS TO PAGEANT FINALS

Attractive and talented young ladies representing 50 counties will be on stage and in the limelight at the annual convention of the Georgia Forestry Association on Jekyll Island, June 11-12 to compete for the Miss Georgia Forestry crown.

The contestants, selected on the county level in pageants sponsored by civic clubs, merchants bureaus, garden clubs and other community organizations, will vie for the honor of reigning for one year. The state winner will represent the forestry association, forestry commission, forest-related industries and other groups in the promotion of forestry. She will appear in parades, at festivals and attend other functions.

Counties represented this year will be Gilmer, Henry, Coweta, Heard, Pike, Meriwether, Upson, Worth, Cook, Irwin, Telfair, Wheeler, Toombs, Treutlen, Davson, Rabun, Washington, Richmond, Lincoln, Jefferson, Early, Miller, Grady, Decatur, Atkinson, Bacon, Brantley, Charlton, Bryan, Clinch, Seminole, Coffee, Glynn, Pierce, Ware, Madison, Barrow, Morgan, Walton, Newton, Rockdale, Greene, Oconee, Crisp, Dooly, Macon, Taylor, Emanuel, Jenkins, and Screven.



April Clanton
Miller County



Leslie Brown
Telfair County



Jennifer Smith
Butts/Henry



Eve Harrison
Seminole County



Neysa Thomas
Glascok/Jefferson



Gina Wolfe
Ware County



Meg Summerour
Barrow County



Jennifer Griffin
Macon County



Capricia A. Lee
Morgan/Walton



Wendy A. Steen
Clarke/Oconee



Holly Music
Glynn County



Lawana LeRoy
Lincoln County



Donna Lowery
Lamar/Pike/Spalding



Michelle Rabom
Richmond County



Ashley King
Worth County



Kelly Roland
Cook County



Teresa Nichols
Dawson County



Monique C. Lunsford
Rabun County



Shannon N. Bonelli
Pierce County



Angel L. Fowler
Decatur County



Michelle Payton
Irwin County



Amy Pruitt
Screven County



Angel Bames
Meriwether County



Laura Hemdon
Brantley County



Natasha Lashley
Taylor County



Kimberly Shue
Newton/Rockdale



Elizabeth J. Bridges
Emanuel County



Kathryn L. May
Washington County



Aletha K. Cisco
Charlton County



Julie A. Bagwell
Crisp/Dooly



Lisa Carroll
Upson County



Rhonda McLendon
Treutlen County



Ken Allen, left, and Forester Dale Higdon, demonstrate how trunk circumference should be measured. This former state champion black oak, nominated by Allen, is now threatened by potential Gwinnett county road expansion. This tree is the largest of its species in the county.

inches is added to height in feet plus one quarter of the crown spread. The total point score determines a champion tree, but trunk circumference (measured at 4½ feet above ground) is often the initial attraction for a champion tree hunter. National champions are verified and listed by the American Forestry Association headquarters in Washington, D. C. Georgia champions are approved and listed through the Forestry Commission.

Six State Champions

Ken Allen currently has six state champions holding the record. He has had as many as five national champions on record at the same time. Georgia now has 16 national champion (including co-champion) trees.

Allen modestly estimates that he may have found a total of a dozen (state and national) champion trees in his nearly 30 year search; but those who keep track of such things - as baseball fans remember batting averages - say Allen's total is closer to twenty. His champions range from a stately sycamore to a towering black oak. His longest reigning champion is a winged elm, on Atlanta's Morehouse College Campus, that continues to hold the state record after 21 years.

"I'm always looking out for a possible champion," Allen said, "no matter where I am."

Allen's looking pays off, but the satisfaction of finding a potential champion can be fleeting. A few weeks ago, he found what he considered an almost sure thing for a champion post oak in Gwinnett County. However, when the verification papers were sent to Washington, he learned his nominee had been beaten only a few days earlier by a post oak in Augusta.

"That's just the way it goes," Allen said. "There are people combing the woods trying to find a champion. Not so much in Georgia as in other states, but I wish they would."

Allen's wish for more competition in looking for Georgia champions is

RETIRED EMPLOYEE OF TREE SERVICE ALWAYS LOOKING FOR THE BIG ONE

By Bill Edwards

Seventy-two year old Ken Allen has probably nominated more champion trees than anyone in Georgia. He's been looking for a long time - almost 30 years.

Now retired from Bartlett Tree Service and living in Gwinnett County, Allen is not claiming any title to finding
14/Georgia Forestry/Summer 1989

the most champion trees in Georgia, but says he would like to know if anyone has found more.

There are state and national champions; Ken has found his share of both. A champion tree is the largest of its species. Trees are compared in overall size by a combination of three measurements. Trunk circumference in

based on his belief that there are many trees in Georgia that could replace champions in other states where the search is more concentrated. Allen should know because he has spent a lifetime roaming the woods - as well as urban areas - and taking notice of trees all along the way. When it comes to trees, Ken Allen doesn't seem to miss a thing.

"Ever since I was a kid, I've always liked to get out in the woods," Allen said. "Hunting, fishing, even bird-watching."

In 1937, Allen went to work for Bartlett Tree Service in Massachusetts. He was 18 years old and the idea of working with trees in the great outdoors appealed to him. He stayed with the company until he retired in 1980 and saw a lot of changes in public perception concerning tree values - aesthetic and economic.

When Allen started with the Bartlett Company, there was no such thing as an urban forestry program. The Commission's current director, John Mixon, coordinated the nation's first urban forestry program in 1967. Since the success of this initial effort, urban forestry programs have spread nationwide, but in Ken Allen's day things were different.

There was no formal technical training for Allen. He learned the skills of pruning, fertilization and diagnosis of disease and insect problems on the job. However, there was an entry level "climbing school" that had to be passed before an employee could even try to learn the job.

Final Climbing Test

Allen remembers climbing school (learned mainly to rope climbing) as rigorous training with more than a few whistles resulting. The final test was to climb a giant white oak to the top and touch numerous balls attached to the limbs within a required time limit. At this point in training, some of the tree climbing apprentices discovered they were in the wrong line of work, Allen recalls. "One guy froze on the tree limb and the instructor had to lower him down," Allen said.

Allen says that although climbing can be dangerous "if you don't know what you're doing," he fell only once.

"I stepped on a dead limb and fell 20 feet onto a paved road," he remembers. "I was trying to impress the boss and get a raise." Allen was not seriously

...In spite of his high rate of success, there is always that elusive tree that keeps pushing him on.

injured and got the raise in spite of the fall.

As the years passed, Allen worked in the company's North Carolina laboratory and eventually transferred to the Atlanta district for a 10 year stay as district representative. It was in Georgia that he really began to concentrate on his interest in champion trees.

Although Allen does not seem to be a naturally talkative person, he can tell one story after another when he gets started on trees. "Found a Georgia champion one time when I was working on the Augusta National Golf Course," he said. "Couldn't figure out what it was at first, but when I did, it turned out to be a national champion that lasted 10 or 12 years."

The champion Allen refers to was in plain view of many people passing by it every day - not in some remote section of a distant forest. This is where Allen excels in his search for champion trees; he frequently identifies them in a heavily populated urban area where the unskilled observer regards it just another tree of its kind.

But in spite of his high rate of success, there is always that elusive tree that keeps pushing him on. "If I could find a 20 foot American beech, I'd be satisfied," Allen said. "I would quit."

It is doubtful that Allen would quit. The objective of his current research is a champion hophornbeam - sometimes referred to as "musclewood" because the trunk has the appearance of flexed muscles. Allen would like to find a national champion of this species or a river birch in Gwinnett County, because "Gwinnett has never had a national champion," he points out.

So far, the search has been difficult

(continued on pg. 19)

FIELD DAY

(continued from pg. 12)

As with any proper field day, there is an abundance of sideline activity. Exhibits from forestry and land-use related firms will dot the grounds and provide additional information for the curious. Thousands of dollars worth of prizes from the sponsors will be awarded throughout the afternoon. It's a grown-up version of the grab bag booth. And there's no end to the old-fashioned story telling and gossip that's bound to go on all day long.

So come on and join the fun, buy your ticket and follow U.S. 41 until you get to the Georgia Experiment Station in Griffin. Registration begins at eight o'clock on September 27, but you can get your ticket in advance by mailing your check to LFMFD, c/o Albert E. Smith, Georgia Experiment Station, Experiment, GA 30212.

For more information call 1-800-GA-TREES.

FLINT NURSERY

(continued from pg. 4)

owners today cannot personally perform all the operation (as Moore and two assistants performed) the steps and timing warrant close examination. Moore and his crew harvest their own timber, but he is quick to point out that you should harvest no more acres than you can site prepare and plant in one year. "Cut over land makes no dollars, but you still have to pay taxes on it," Moore said.

All seedlings are machine planted by Moore and one assistant. Moore prefers ungraded Improved Loblolly and does his own grading. However, he points out that tailgate grading is not used. Grading is performed in a protected area and seedlings are immediately placed in a number 2 washtub and slime (super absorbant and water). This guarantees him moist, well protected seedlings during planting.

"Fred Moore's lifetime forestry career is characterized by progressive ingenuity in field practices and business pursuits," Westmoreland said. "His assistance to the Commission in the purchase of the Flint River Nursery site is a prime example; this action will continue to have an increasing positive influence on Georgia Forestry and the state's economy for many years to come."

Georgia Forestry/Summer 1989/15

"In addition to tending to the many duties of his own unit, Ranger Davis is always willing - in many instances volunteers - to cross county lines to help neighboring units in pre-suppression plowing, firefighting and helping in many, many other ways! He has instilled that spirit of cooperation in his personnel and the Irwin County Unit is a genuine asset to our district."

District Forester James Tidwell
Tifton District, GFC



Busy Ranger Bo Davis communicates by radio.

IRWIN COUNTY FORESTRY UNIT

ANOTHER IN A SERIES OF STORIES ON OUTSTANDING COUNTY FORESTRY UNITS

"An empire abounding in wealth, an unbroken vastness of virgin pine forests...wolves howled around the cabin doors at night, bear was plentiful, deer, turkey, fish and all other game were to be had almost for the taking."

That's the way Historian J. B. Clements described Georgia's Irwin County when it was established back in 1820.

When Bo Davis was named forest ranger of the Irwin County Unit, Georgia Forestry Commission, in 1984, he didn't find great virgin forests and an abundance of game, but he quickly learned that 135,000 acres of trees that existed in the county represented a much greater worth than did the "unbroken vastness" of woodlands 164 years ago.

Davis, who was a patrolman with the Ben Hill County unit for ten years before moving to Irwin County to replace retiring veteran Ranger Jack Eli Vickers, has often been praised by his district supervisors for his performance and was recently promoted to senior ranger status.

16/Georgia Forestry/Summer 1989

But what makes Irwin County Unit such an outstanding unit? After all, it's a small county with only a three-man team. There are only two suppression units and patrolmen have to double as tower operators. Personnel at the Tifton District Office answer the question by pointing out that "major accomplishments" with "limited resources" are what sets the unit apart.

Showcase Unit

They term the Irwin unit a "showcase" for others to follow.

The unit has sold almost 2,000,000 seedlings this year and has completed 94 management cases. More than 50 wildfires have been suppressed, with firefighters holding the average size fire to 2.69 acres. The unit has plowed more than 150 miles of pre-suppression firebreaks during the year and handled 94 management cases. The unit is known for its quick response when help is needed by forestry units in surrounding counties.

Ranger Davis is especially proud of the reforestation progress that is being made in his county. "Our ongoing reforestation drive, plus commitment to the Conservation Reserve Program, has resulted in the planting of approximately 3,000 acres in trees each year

for the past four years," Davis said and told of a certain satisfaction in "seeing healthy young pines thrive on lands that used to be barren or in marginal agricultural crops."

Irwin County, named after Governor Jarred Irwin who served in the office from 1806 until 1809 when the state capitol was in Louisville, today is mainly a rural county made up of several hundred small farms ranging from 50 to 500 acres. Although peanuts and tobacco continue to be important crops and many work on the land, a number of rural residents commute to work in Tifton, Fitzgerald and Douglas. "Many of these landowners now have some acreage in planted pines," Ranger Davis said, "and they are cooperative in every way." He said "very few fires occur from landowner carelessness and we have had a minimum of notification to burn violations."

The ranger is currently working to establish a Rural Fire Defense program in the county. The Forestry Commission administers the RFD program which coordinates the procurement of equipment and the training of firemen for volunteer fire stations in small towns and rural areas. Davis has filed an application with the Area Planning and Development Commission for a

community development block grant. The approval would pave the way for countywide fire protection.

Many forest rangers and patrolmen have had some tense moments in firefighting and Ranger Davis well remembers the date of his most frightening encounter. "It was October 3, 1978," he recalled. "I was plowing through a field of very high grass on a windy day in trying to save a man's lakeside cabin." He said he thought he was well ahead of the fast moving flames and when his tractor suddenly ran into a fence he leaped out of the seat to snip three strands of barbed wire with wire cutters. "That was when the flames overtook me," David related. "The fire swept over the tractor and for an instance I was unable to breathe because of a lack of oxygen...I came out of it well blistered and pretty shaken up, but that was all."

The ranger is married to the former Miss Karen Watson of Fitzgerald, who is now property appraiser for the Ben Hill County tax assessor's office. They have two daughters, Brette, 6, and Katie, 18 months. The family attend Harbor Baptist Church in Fitzgerald. Davis is a member of the Ocilla Masonic Lodge.



BROWN



DAVIS

Patrolmen

Jerry Brown learned a lot about cooking while serving three years in the Navy. He worked 12 to 14 hours a day to help feed 265 hungry sailors when his ship was at sea.

He enjoyed cooking and could have become a chef or perhaps opened his own restaurant when he returned to civilian life, but he attended Ben Hill-Lynn Tech and became an expert electrical mechanic and his career headed in another direction. Ranger Davis is glad he did!

Patrolman Brown came with the Irwin County Unit in 1983 and said he found his work "challenging and interesting ever since." He said he appreciates the security the job offers

"Bo Davis is a fine young man and he is doing a good job. We are especially proud of the effort he is making to get the Rural Fire Defense program in our county. He is gaining a lot of support."

**W. S. Bradford, Jr.
Editor and Publisher
The Ocilla Star**

"Bo Davis and his people are overly cooperative. I order trees through them and I've used their tree planter...I prescribe burn about a thousand acres a year and they always advise me and help me...we are proud to have them in the county."

**Landowner Milton Hopkins
Former Georgia Tree Farmer of the Year
Former National Tree Farmer of the Year**

"The Forestry Unit serves the people of the county well. Through the years Davis and his people have given 100 percent. We have few forest fires, but if we had one in the middle of the night, you can be assured the unit would respond...We are well pleased with the unit."

**A. T. Fuller, Ocilla
Forest Landowner**

and finds that "there is something different to do every day." Since coming with the unit, the facility three miles east of Ocilla has undergone major renovation and Brown has learned to be a carpenter, painter, roofer, electrician and plumber. His expert knowledge of diesel engines is also an asset to the unit and he keeps the rolling stock in top condition.

The patrolman came to the unit when it was headed by Ranger Jack Eli Vickers. "I had to beg Jack to let me go out on my first fire," Brown said, "but he told me 'Naw, don't yet have enough experience' but he finally let me go and I did okay on that one." He said, however, that the first fire he handled by himself was rather frightening. "Got hung up on a stump," he explained, "and I had to do some fast talking to my tractor to get out of there." Now that he is a seasoned firefighter and firebreak plowing is usually routine, he said he is never complacent when it comes to safety on the fire line.

The patrolman is married to the former Miss Diann Barks of Orlando and they have three sons, Jerry, Jr., 14; Eric, 11; and Kevin, 6. Diann works for the

Prestolite Corporation in Tifton. The family is active in the Ocilla Church of God.

Jimmy Davis likes to operate bulldozers and any other kind of heavy, mobile equipment.

He once worked for a construction company in building roads and ponds, clearing lands and other projects, which well qualified him as an operator of a crawler tractor when he came



with the Commission in 1984.

With all his experience, however, the patrolman was not prepared for a harrowing incident that occurred after he had been with the Irwin County

Forestry Unit about four years. Davis, a native of Fitzgerald who is now earning an associate degree in forestry at Abraham Baldwin College, tells it this way:

"I was plowing a pre-suppression firebreak one morning and when I looked back to see if I was making a clean break, a big limb from a black gum tree suddenly shot up beside the brake pedal and cut a five-inch gash in my leg before going up the side of my body and tearing off most of my clothes." He said he began to feel his hands and arms tingle and "then I passed out." Luckily, he soon regained consciousness and was able to radio his unit office for help.

Medical people at the emergency room told him he was "very fortunate" the jagged tip of the limb just missed a main blood vessel in his leg.

The patrolman said he has learned to drive nails, paint and work in all other areas of construction and maintenance since he came with the unit.

During his leisure time - when he can find it - he likes to hunt. He is naturally big on fishing as he grew up around a few million fish. His late father, Edison Davis, was superintendent of the state-owned Bowen's Mill Fish Hatchery in Ben Hill County.

Patrolman Davis is a member of the Bethlehem Baptist Church in Fitzgerald and the Fitzgerald Optimist Club.



NEW SURVEY REVEALS PINE REMOVAL EXCEEDS NET GROWTH IN CENTRAL GEORGIA COUNTIES

Industrialists, foresters, landowners, logging contractors and others interested in a recently completed inventory of timber in the 49-county Middle Georgia region were told recently that annual removal of pine in the area is exceeding growth by 24 percent.

The survey was conducted by the U.S. Forest Service, with the Georgia Forestry Commission as principal cooperator. The survey, carried out in seven to ten year intervals, divides the state into five geographic units. The Central Georgia unit, a group of counties extending from the Alabama to the South Carolina state line, consists of 7,200,000 acres of forestland.

John Mixon, director of the Commission, said the findings in the survey "are very disturbing and we must somehow turn this trend around." The director noted that more than a billion



dollars is currently being spent in Georgia in the establishment of new forest-related industries and the expansion of existing plants. He said, "we must assure these industrialists that adequate raw forest material will be available now and in the future."

The survey revealed that planted pine stands in the region has increased 40 percent since the previous inventory in 1982 and pine plantations currently account for 44 percent of all pine stands in the region. A bright note in the study is that the annual rate of stand regeneration has more than doubled, averaging approximately 217,000 acres each year.

The volume of hardwood growing stock increased by almost three percent, with sweetgum and a variety of red oaks listed as the dominant hardwood species; together, they make up 47

percent of the region's hardwood inventory.

Although the pine harvest in the region has exceeded growth and reduced inventory about ten percent, the survey showed dramatic improvement in the rate of pine regeneration in the 1980's with a prediction that the negative trend would be reversed by about the year 2000. In the meantime, however, it is also predicted that inventory will show an additional 15 percent reduction before the turn of the century.

GEORGIA TREE FARM SCHOLARSHIPS GIVEN

A Randolph County farm youth and a Wesleyan College student from Griffin are recipients of annual scholarships awarded by the Georgia Tree Farm System.

A \$1,000 scholarship was presented to Chris Moshell, son of Mr. and Mrs. Phil Moshell of Morris, and a senior at Randolph Southern High School in Shellman. The forest conservation



MOSHELL

organization awarded a \$500 scholarship to Emily Harris, daughter of Mr. and Mrs. E Frank Harris, Jr. of Griffin and a sophomore at Wesleyan College in Macon.

Plaques recognizing the students for their achievement were also presented by former President Jimmy Carter at the Carter Center in Atlanta. Carter and his wife are certified Tree Farmers.

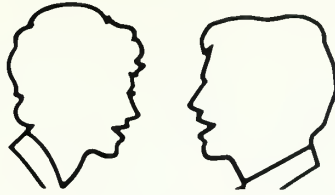


HARRIS

Chris plans to enter Auburn University this fall to study mechanical engineering and Emily will continue her education at Wesleyan where she is majoring in psychology.

An applicant to qualify for the scholarship must be a legal dependent of a certified Georgia Tree Farmer who has been a member for at least two years.

PEOPLE



In The News

CHAMPION TREES

(continued from pg 15)

FORESTER VAN MOORE, who came with the Commission in 1986 as a patrolman in Forsyth County and later served as ranger of the unit, was recently transferred to the Gainesville District office to succeed FORESTER



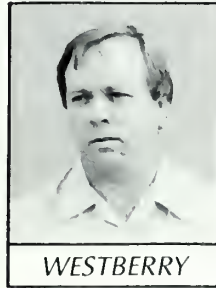
MOORE



McCLURE

NATHAN McCLURE as reforestation forester. McClure was transferred to the research department in Macon, where he is heading the Brender Experimental Forest and working as forest specialist in wood energy. Both Moore and McClure are natives of Dahlonga, and graduates of Lumpkin High School and the School of Forest Resources, UGA. Moore served four years in the Navy and the forester and his wife, Cary, and daughter, Erike,

Metter, where he was active in 4-H, Y-Club, football and baseball activities in high school. A member of Alpha Gamma Phi Fraternity, Lanier served an internship with the land division of Georgia Power Company...LEROY CARTER, patrolman in the Echols County Unit since coming with the Commission in 1984, is now ranger of the unit. A native of Berrien County, the ranger served four years in the Navy and studied industrial plant maintenance at Valdosta Area Vocational Tech. Carter and his wife, Vicky, and children, Bryce, Amanda and Meagan, attend the Church of God... DAVID WESTBERRY has been named forest ranger of the Lanier-Lowndes



WESTBERRY



MAYFIELD

Unit to succeed DONALD O'QUINN, who became permanent aircraft pilot for the Tifton District. Westberry, formerly a patrolman, came with the Commission in 1985. He is a graduate of Lowndes County High School and attended Valdosta State College. The ranger and his wife, Adrian, have a son and a daughter...GLENN MAYFIELD, a graduate of the School of Forest Resources, UGA, has been named ranger/forester of the Douglas-South Fulton Forestry Unit, to succeed STEVE GREY. Grey has been transferred to Bartow County. Mayfield is a native of Atlanta and attended Central Christian School prior to entering the university. He is married to the former Miss Debora Randall of Indiana and they have a son, Phillip, and a daughter, Shelly. The family attends Midway Methodist Church in Douglasville.

with a few disappointments. He recently found a river birch on a Gwinnett County creek that barely missed being a state champion.

"But I guess that's what makes it interesting," Allen said.

As Allen continues what he considers a pleasant retirement hobby, some important byproducts are being reflected by the Champion Tree Program. As an increasing number of rural counties fringing cities become more urbanized, a new concern about preserving trees during the development process is emerging. Champion trees are promoting this awareness.

Dale Higdon, Commission urban forester who works the Gwinnett area and has assisted Allen in documenting some of his nominations, points out that communities are becoming more and more reluctant to sacrifice trees - especially trees of championship caliber - to development. He said developers are also becoming more knowledgeable on how to preserve individual trees and green belts during construction.

"Trees enhance the value of property - especially in an urban environment," Higdon said. "Developers are realizing this fact."

Bob Lazenby, who heads the Champion Tree Program on the state level for Georgia, also sees increasing interest and value in the program. Lazenby, who also serves as the Commission's chief of Information and Education, urges participation in the program by Georgia residents in rural and urban areas.

"A great many champion trees throughout Georgia have not been documented," Lazenby said. "There's personal satisfaction and recognition in nominating one of these trees, but it also offers a vital boost to public awareness."

Lazenby said anyone desiring to participate in the program can obtain details by contacting a Commission forester. These foresters can be reached through your nearest county forestry unit. A complete brochure on the program may be obtained by contacting: The American Forestry Association, P. O. Box 2000, Washington, D. C. 20013-2000.

Meanwhile, Ken Allen is still looking.



LANIER



CARTER

attend the Baptist Church. McClure worked with the U.S. Forest Service following graduation and came with the Commission in 1984 as patrolman in the Forsyth County Unit. The forester and his wife, the former Miss Peggy Morris of Atlanta, are Baptists...FORESTER JERRY (Reggie) LANIER, a recent graduate of the School of Forest Resources, UGA, will assume the position of management forester in the Washington District June 16. Lanier was born in Savannah but grew up in



There's good advice...

Should you clear your timber or would it be advisable to thin your tract of pines? Should you reforest your land by planting seedlings or would it be wiser to leave seed trees when you harvest and depend on natural regeneration? How many bids should you get before you are reasonably sure you will receive a fair price for your sawlogs or pulpwood? What essential terms should be in the logger's contract before you sign it? There's good advice and there's bad advice, but the best advice comes from a registered forester. Contact a consultant forester or a forester of the Georgia Forestry Commission for the right answers.

...and there's bad advice



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Georgia

FORESTRY

AUTUMN, 1989

**GYPSY MOTHS
HEADING SOUTH**

**SADDLE TREE
WOODCRAFT ENDURES**

**NEW FORESTRY
QUEEN CROWNED**

FEATURE PHOTO



This photo from Georgia Archives shows stacks of Southern yellow pine being shipped from Savannah docks in 1890. Destination of the lumber is unknown, but it was probably bound for New York and other booming Eastern seaboard cities

Near the turn of the century, vast areas of America's Southern forests were being cleared of virgin timber to make way for agricultural needs of a growing nation on the verge of industrialization. Much of the wood cut was exported to other countries.

The wood was straight, durable and easily worked with for construction. Much of this lumber, heart pine, is still standing in sturdy European buildings.

Southern yellow pine was the wood of choice for the 1890's - as it is in today's wood market. Versatile characteristics have enabled Southern yellow pine to be adapted for many uses through modern technology. The adaptable wood is as vital in today's fast-paced economy as it was in establishing a transforming nation's world trade power in the 1890s. Savannah remains one of the most important shipping centers on the Eastern seaboard.

ON THE COVER - Although the Georgia Forestry Commission is charged with the protection of millions of acres of forests in rural areas, it also has the responsibility of helping urban areas protect and maintain trees. The well kept trees in this scene are on the grounds of the Cultural Center in Madison.

(Photo By Billy Godfrey)

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LAND-USE and FOREST MANAGEMENT FIELD DAY

WEDNESDAY, SEPTEMBER 27

As a private landowner, you are the manager of your land and your trees. You can increase the value and benefits of your land, and preserve our natural resources for future generations with specific land-use and forest management techniques.

Local, state, and national specialists will demonstrate techniques and answer your questions. Come for the information you need to increase the recreational, aesthetic, and economic returns on your land. Numerous exhibits will be provided by forestry and land-use related firms and thousands of dollars worth of prizes from the sponsors will be awarded throughout the afternoon. Registration begins at 8:00 a.m. The Field Day will be held on Ellis Road near Griffin.

- VEGETATION CONTROL
- PRESCRIBED BURNING
- WILDLIFE MANAGEMENT
- SOUTHERN BARK BEETLES
- LOW-COST REGENERATION
- THINNING PRACTICES
- SELLING YOUR TIMBER
- HARDWOOD MANAGEMENT
- POND RENOVATION
- DEVELOPING HOMESITES IN WOODED AREAS
- MANAGING PINE STANDS FOR STRAW PRODUCTION
- PINE PLANTATION ESTABLISHMENT
- FOREST MANAGEMENT, ESTATE AND TAX PLANNING, AND CONSERVATION PLANS
- BEST MANAGEMENT PRACTICES AND FOREST ROAD CONSTRUCTION

**For
Additional
Information,
Contact
Your Local
Forestry
Commission
Office Or
1-800-GA TREES**

(Please detach here and return)

LAND-USE AND FOREST MANAGEMENT FIELD DAY

Registration _____ September 27, 1989
Name _____ County _____
Address _____
City _____ State _____ Zip _____
Telephone (day) _____ Evening _____

\$8.00 Pre-registration fee before 5:00 P.M. September 20. After September 20 -registration will be \$10.00. Price includes lunch. Program and hat to first 1500 registrants and a chance to win numerous door prizes.

Make check payable to LFMFD. Mail to LFMFD, c/c Albert E. Smith, Georgia Experiment Station, Experiment (Griffin), Georgia 30212.

RETIRED COMMISSION PIONEER LAUNCHES SECOND CAREER

NOW HE OWNS A TELEPHONE COMPANY

By Howard Bennett

Avery Strickland of Nahunta is unique among retirees of the Georgia Forestry Commission. He formed his own telephone company as a result of technical knowledge and practical experience gained during his career with the Commission.

He is also one of the first rangers - and possibly the very first - hired by the old Timber Protection Organization to later become a Commission ranger when the state agency assumed forest protection responsibility in his county.

Strickland knew early in life that he wanted to pursue work related to the forests, a career that was quite a contrast to the telephone business he would eventually establish. "My father was in the sawmill and pulpwood business and I grew up in the woods," he said, "and I had my goal set on forestry." Money was tight during that time of the Great Depression, but the youngster finally found a way to advance his education beyond high school. "I milked my way through school," to study forestry and agriculture, he said.

ACCEPTED TEACHING POSITION

He explained that he had to roll out of bed at four o'clock every morning, seven days a week, to milk up to 35 cows at the Martha Berry College dairy farm to pay for his tuition and board. After college, forest-related jobs were scarce so he returned home to his native Brantley County and taught school for \$61.00 a month for four years.

Strickland's employment in forestry came in September, 1939, when he was offered the position of ranger and secretary of the Brantley County Timber Protection Organization (TPO), with an office in the courthouse. He competed with 17 other applicants to land the job. The TPO later moved down the street to a new headquarters building constructed by the Civilian Conservation Corps (CCC).

The little frame building, now almost 50 years old, became headquarters for the Commission's unit. It was finally vacated earlier this year when the unit moved to new offices on U. S. Highway 82 - two miles east of town.

In 1933, CCC enrollees erected steel fire lookout towers in the towns of Hoboken, Waynesville and



Strickland shows a map of the early Commission Telephone system to Ranger Bary Chesser, who now heads the Brantley County Unit once directed by the retired ranger.



Ranger Strickland and his personnel maintained telephone lines strung through the woods for fire control communications in the early days of the forestry Commission. The experience in line repair, switchboard operation and other work with the system led the veteran ranger to form his own telephone company after retirement.

Today, he is owner and president of Brantley Telephone Company, Inc., which efficiently serves his home county and portions of five neighboring counties. The operation is fully automated and 97 percent of the lines are now underground.

Strickland learned how much he is held in high esteem by townspeople one night last May when he was invited to attend "a small barbecue dinner." When he arrived, he learned that he was the guest of honor and more than a thousand people were in attendance to applaud as a state senator presented a plaque designating him "Nahunta Businessman of the Year."

The Brantley County TPO was formed in 1925 when a small group of landowners began the operation by using an automobile as the only means of transportation into the woods and calling on volunteers to fight the wildfires. The late J. R. James, clerk of court, was named the first secretary-treasurer and the organization had the support of the K. S. Varn Company, a naval stores firm with vast forest holdings, and many individual landowners who wanted organized protection of the county's more than 263,000 acres of forests.

atallatersville and strung 150 miles of telephone lines throughout the pinelands as a communication network for reporting forest fires.

When Strickland assumed the position as ranger, he inherited the rural telephone system as part of his unit. "Those phone lines the CCC boys strung up on cypress trees in the early thirties had to be serviced," he said, "and I had to learn everything from the operation of a switchboard to line repair." He said the system consisted of 30 telephones, with most of them installed on the property of large landowners.

HAD TO MAINTAIN LINES

The pioneer ranger said he was intrigued with the lit system that tied the remote areas of the county's forests with the unit office, but he found the maintenance of the lines to be a troublesome, unending chore. Rapidly growing trees and brush had to be continuously cleared from the lines.

When the ranger began planning his retirement, he learned that the "State of Georgia was anxious to get out of the telephone business and that's when I decided I would like to get into the telephone business." An agreement was reached and Strickland bought the system, thus ending one career and beginning another.

FOREST LANDOWNERS ASSESSED

The TPO assessed landowners one cent per acre and with those funds the organization eventually was able to buy a pickup truck, a tractor and a couple of plows. When Strickland became ranger, however, the depression was waning and the country was moving into a war economy. Money became more plentiful and additional people were hired and equipment was updated. The ranger's first annual budget was \$7,000. There were 300 fires that year, burning 6,000 acres.

In his association with the TPO and his work with the Commission from its infancy, Strickland naturally witnessed most of the important innovations that helped bring the agency to its present day status as one of the nation's leading forestry organizations.

He saw the telephone give way to sophisticated radio communications, the construction of a network of fire lookout towers across the state, the introduction of aircraft for fire patrol, the replacement of water wagons by crawler tractor and plow units, and the employment and training of firefighters to replace civilian volunteers.

The former ranger remembers the great "cow burns," the term used for the deliberate setting of fire to the woods to affect the "green up" in the spring to provide pasture for livestock. He considers the closed range law



This little office building in Nahunta, constructed almost 50 years ago by the Civilian Conservation Corps, is said to have been the first county unit building in the Commission. It was occupied by the Brantley County Unit until last year, when the office was moved to spacious new quarters two miles east of the city. Forest Ranger Barry Chesser is shown pointing out the historic and now vacant building to a visitor to his city.

enacted in 1954 as "one of the best things that ever happened to forestry." He admits that many landowners at first took the law lightly, "but our unit was the first to have a violator arrested and convicted and after that, we didn't have any trouble enforcing the new law."

Strickland said the late Guyton Deloach, who was his district forester and later was appointed state forester and Commission director, "fortunately selected Brantley County as a model county forestry unit. As director, he sent me all over the state to demonstrate our newest tractors and other equipment." He said his job was "to sell" other units on equipment that had proven to be effective in his own county and he "really got the attention" of personnel when he showed that a two-way radio could be installed on the tractors. He said the travel around the state was "very enjoyable work" and it gave him an opportunity to meet Commission people and to gain a better insight into the scope of the organization that was developing around the state.

According to some local landowners and records found in the county, Brantley was the first county in the state to establish a TPO, followed by Clinch, Charlton and Camden Counties. The year 1925 also saw the General Assembly pass legislation creating the Georgia Forestry Department. In 1931, the department was reorganized as the State Department of Forestry, Parks and Geological Development, and did not exist under

the name of Georgia Forestry Commission until 1949.

Although records show that there were 87 TPOs by 1933, history is sketchy as to when the TPO in the individual counties merged with the county forestry units and ultimately turned over protection and other responsibilities to the state agency, as it too evolved from a multi-resource department to an exclusive organization dealing with forest protection and development.

Barry Chesser, current ranger of the Brantley County Unit, said he is fascinated with accounts he has heard and read of the early days of forest protection in the state and is appreciative of Strickland and others who laid the groundwork for the Commission. "Our first ranger in Brantley County is well respected and remembered for the work he did in establishing a good forest program and it has been our goal to retain and expand the program he started," said Chesser.

Today, Herdsman, Marshall Bryan keeps track of 70 cows at the Martha Berry College dairy and milking time is still four o'clock in the morning for several students working their way through school. The old barns have changed little since Strickland was there more than 50 years ago, but the Nahunta telephone executive would be pleased to know that electric milkers have, of course, long since replaced the old hand squeezing method.

CERTIFICATE REQUIRED FOR STRAW TRANSACTION

A Senate bill passed during the 1989 session of the Legislature requires persons harvesting pine straw to have a certificate of "Harvest" in their possession.

The new law was created to protect landowners from persons who trespass on their lands for the purpose of harvesting pine straw. Legislators said they saw a need to deter those tempted to wrongly go on another's land to harvest what has become a \$10 billion industry in Georgia.

The new law requires the harvester to have the certificate in his possession when gathering a landowner's straw, and at the point of sale.

The new law doesn't apply to persons harvesting straw for home or personal use, but those who do violate the law as set forth in senate bill 88, 1989 session of the Georgia Assembly, will be guilty of a misdemeanor.

The certificates, which must be prepared and signed by both the harvester and the landowner, are issued at the discretion of the harvester and are available from any forestry Commission office in the state.

U.S. REPRESENTATIVE THOMAS HONORED BY ASSOCIATION

The Forest Farmer Award was presented to U. S. Representative Lindsay Thomas by the Forest Farmers Association at the 48th annual meeting in recognition of his contributions to southern forestry.

In presenting the award to Thomas, Forest Farmers Association President Van Cleave said, "The 1989 recipient is by far the youngest to receive this prestigious award, but age does not count when you look at what he has done and is doing for forestry in the South and the nation."

Thomas of the First Congressional District of Georgia, one of very few members of Congress who is a certified tree farmer, is the founding chairman of the Forestry 2000 Task Force. The task force was organized in 1989 through a bipartisan coalition of House members who share an interest in timber and forestry issues. A total of 116 members of Congress currently belong to the organization.

DON'T TAKE CHANCE WITH DOGWOOD TREES OUT IN THE FORESTS

Fall is the season for transplanting trees and many people are inclined to take to the woods to dig up plants to re-establish on their lawns. If you've eyed some pretty dogwoods in the forest and plan to add them to your residential landscape, the Georgia Forestry Commission says DON'T DO IT!

There's a problem called fungus discoloration, which causes the fatal disease termed dogwood anthracnose. First found in New York in the late 1970's, discoloration has spread to 17 states, primarily moving down the Appalachian mountain chain and experts say wild trees growing naturally on the cool, damp forest floor, are most susceptible to the disease.

Commission Urban Forester Ken Bailey urges people not to transplant dogwoods from the wild because they may be bringing the disease to their neighborhoods. Although trees in sunny locations, such as yards and parks, have survived in areas where the fungus has been present for a decade, Bailey said yard trees are best protected by making sure they have adequate fertilizer and water.

Symptoms of the disease include purple-rimmed spots with brown centers on the leaves. Eventually, twigs die, followed by branches from the bottom up. Water sprouts also occur. It takes two to five years after the leaf spots appear for a tree to die, Bailey said.

On behalf of the task force, Thomas has testified before several congressional committees, the Internal Revenue Service (IRS), and at congressional field hearings in support of various forestry programs and the needs of timberland owners. Recently, Thomas introduced legislation that would restore annual business tax deductions to owners of small timberland tracts.

COMMISSION SEEKING HISTORIC TREES INFO

Is there a historic tree in your neighborhood? One that legend claims a famous Confederate general tied his horse to, or perhaps a landmark oak that denotes the site of a treaty signing ceremony or some other event? Maybe your tree is not that historic, but has great significance on the local level.

The Commission is asking residents throughout the state to help compile a list of historic trees to be included in a national register.

Urban Forester Sharon Dolliver said ten historic trees in Georgia are currently included in *Famous and Historic Trees* but "there are many others in our state that are of historic status and should be featured in the national publication."

Georgia trees now included in *Famous and Historic Trees*, published by the American Forestry Association, are the LaFayette Oak and the Juliette Low Oak, Savannah; the Franklin D. Roosevelt Pine near Warm Springs; the General Robert Toombs Oak and the Thomas H. Chivers Holly, Washington; Wrightsboro Mulberry, Wrightsville; Oglethorpe Yews, University of Georgia campus; Sidney Lanier Oak, Brunswick; the Tree That Owns Itself, Athens; and the Big Oak of Thomasville, Thomasville.

Persons knowing the whereabouts of trees that might qualify for the distinction should write to Forester Sharon Dolliver, Georgia Forestry Commission, P.O. Box 819, Macon, Georgia 31298-4599, or call 912/744-3377.

ARBOR DAY MATERIAL IS FREE TO TEACHERS

The National Arbor Day Foundation recently announced the availability of free instructional materials for fifth grade teachers. "Arbor Day: A Celebration of Stewardship" contains a color poster, a booklet, an audio cassette, and a teacher's guide with student activity sheets.

The National Arbor Day Foundation is a non-profit educational organization dedicated to tree planting, conservation, and environmental stewardship.

To receive the material, fifth grade teachers should write to: Trees Are Terrific, The National Arbor Day Foundation, 100 Arbor Avenue, Nebraska City, NE 68410.



Patrolman Mike Brunson confers with Ranger Hollis Burns.

GORDON COUNTY UNIT

Hollis Burns, who grew up on a Gordon County farm, declares that "there is only one thing harder than picking cotton, and that's loading pulpwood."

After graduating from Oostanula High School and serving some time with the U. S. Army in Japan, however, he came home to begin a career that would involve the protection and perpetuation of the forests that grow profitable pulpwood.

He no longer had to load pulpwood, of course, but he did have the task of battling wildfires that often threatened the growth of pulpwood and saw timber in his native county.

Burns came with the Commission as a forest patrolman 24 years ago and shortly after the retirement of Ranger J. C. McDearis in 1975, he was named to head the Gordon County Unit. He attained senior ranger status last year.

The ranger's firefighting experience actually began during his youth. "When fires broke out in the woods," he said, "a fire warden with the U. S. Forest Service would hire several boys around here to help fight fire with rakes." He said they were paid 45 cents per hour "and that was real good money during those days of the Great Depression." He said he "really learned what a giant fire could do to a forest" when he served as part of the

first team of firefighters sent to the west by the Commission.

Although the North Georgia mountains are not the towering Rockies of the west, they do present some problems when wildfires began racing up their slopes. But Ranger Burns contends that his people "know how to expertly handle a tractor in our kind of

ANOTHER IN A SERIES OF STORIES ON OUTSTANDING COUNTY FORESTRY UNITS

terrain." He said his patrolmen can size up a fire and then use good judgement in knowing "when to climb, how to climb and when to back off."

Burns said he has seen many improvements in working conditions since he first mounted a tractor as a young firefighter in 1965. He remembers the 44-hour work week "when we knocked off at noon on Saturday and then had to stay by the phone at home the rest of the weekend." He said there were many times when fires "kept you from getting home for supper, but that became a way of life and the family accepted it." Accepting it in his family were his wife, Charlie, a licensed practical nurse; a son, Jimmy, now attending Berry

College; and Penny, a daughter who is now married.

The ranger said the greatest improvements have been made in communications, equipment and training, and he has enjoyed seeing these changes come about during his time with the Commission.

Today, Ranger Burns and his three patrolmen and a tower operator are charged with the protection of 169,900 acres of forests throughout Gordon County. They also work closely with six Rural Fire Defense units which are staffed by volunteer firemen to fight structural fires.

PATROLMAN TROY FLOYD, JR.

Forest Patrolman Troy Floyd Jr. said he "grew up" in the Georgia Forestry Commission. His father, who retired as a ranger of the Floyd County Unit after 34 years of service, greatly influenced him in seeking a career in which he could enjoy working outdoors.

Floyd, who came with the unit five years ago, said he worked for a time in a mill but didn't like the confinement. Now that he is with the Commission, he said he enjoys working with forelandowners and others who need the agency's services.

Ranger Burns said Floyd "caught on quickly in handling a tractor in mountainous terrain and is also very efficient in duties other than firefighting." The patrolman, who earned the rank of Eagle Scout in Troop 55 in Rome and a graduate of Armuchee High School, came with the unit in time to get in on a major remodeling project at the headquarters on Old Fairmont Highway near Calhoun.

The patrolman and his wife, Wendy, a licensed practical nurse, have two children, Michael, 5, and Katie, 18 months.

PATROLMAN THOMAS BLALOCK

Forest Patrolman Thomas Blalock felt that the grass was greener on the other side of the fence. He was working for the Department of Transportation in the seventies and his DOT unit was next door to the forestry unit.

He would look over the fence at a see uniformed men leaving out white transport trucks bearing yellow crawler tractors and reasoned that fighting forest wildfires would be more exciting and rewarding than mowing

the grass along state highways. He came with the Commission in the fall of 1978.

Although he sometimes feels the effects of shrapnel wounds in a leg and arm from combat in Vietnam, the patrolman doesn't let it stand in the way of turning in top performance in the unit, according to Ranger Burns. Many in the Commission remember Blalock as the patrolman who demonstrated a portable wood gasifier around the state.

Patrolman Blalock and his wife, Ann, a rural mail carrier, have a son, Anthony, 18, who is entering Georgia Tech this fall, and two daughters, Angie, 16, and Amanda, 8. The family attends the Baptist Church.

PATROLMAN MIKE BRUNSON

Forest Patrolman Mike Brunson, a native of Douglasville, is a man who knows exactly what to do with a set of tools. After graduation from Armuchee High School, he attended Coosa Valley Technical School, where he received excellent training in auto mechanics.

His knowledge and skill in mechanics has been invaluable to the unit in the maintenance of its trucks and tractors.

The patrolman remembers being in only one "tight spot" during his five years with the Commission. "I headed my tractor into a gorge one day when we were having a wildfire driven by a 30 to 40 mile an hour wind," he related. "The minute I did it, I realized it was a mistake. A great wall of fire was coming toward me from the other end of the gorge and it was moving fast!" He said he dreads to think what would have happened if the engine on his tractor had conked out as he hurriedly backed out of the trap.

Brunson's favorite hobby is hitting the Appalachian Trail, with dreams of one day completing the entire 2,100 mile route from Maine to Georgia. By using vacation time and other free time he has already walked approximately 900 miles of the trail.

Patrolman Brunson and his wife, Ann, who had enough of the Appalachian Trail after a few miles, have two daughters, Rebecca, 4, and Hannah, 9 months. The family is active in the East Mountain Church of God.

TOWER OPERATOR FAYE SIMMONS

Faye Simmons has been looking out over the ancient mountains and



Patrolmen Mike Brunson and Troy Floyd, Jr. discuss a mechanical problem. Below, Tower Operator Faye Simmons refills a literature rack and Patrolman Thomas Blalock checks the weather station.

valleys of Gordon County for 20 years. Her job is to keep an eye out for forest fire from her vantage point high in a 65-foot tower mounted on a plot of ground 740 feet above sea level.

When she started work with the Commission, she said she "practically ran" up the many steps to the cab of the tower and considered it good exercise. "Now I've slowed down," she said, "and the climb doesn't get any shorter."

The tower operator said she has always enjoyed her work. "It's seldom boring," she said, "when we have high fire ratings, I'm busy checking smoke from the tower and when rains come, I'm doing paper work down in the office."

Mrs. Simmons said "the best thing about being with the Commission is the people. You can't find nicer people to work with, here in the unit and across the district."

The tower operator and her husband, Clyde, a technical director with a carpet manufacturing company, have six married children: Steve, Toby, Kelley, Debbie, Judy and Wayne.

District Forester Carl W. Melear said from his office in Rome that the Gordon Unit is "one of the best looking units in the district...immaculate is the word!" He said the equipment in the unit is always in good repair, the people are hard working and polite when dealing with the public, and the services are always professional.





GEORGIA SADDLE TREE COMPANY PRESERVES RARE CRAFTSMANSHIP

By *Bill Edwards*

Most people don't know that a saddle is more than half wood. The leather portion is molded over a solid, wooden frame called a "saddle tree."

Joe Barefoot, a North Georgia businessman, knows all about saddle trees. He manages Flor Saddle Tree Company, Inc., located in Demorest. The company is the only one of its kind in Georgia and Barefoot maintains it is the oldest saddle tree company in the United States.

"Maybe the oldest in the world," Barefoot said, "but that's something saddle tree companies have in common. They all claim to be older than the others."

Although which saddle tree company is the oldest may be debatable, one thing is certain. Only a handful of such companies exist in the U.S. and - as Barefoot puts it - "making saddle trees is one of the more unique uses of wood for business purposes."

"We probably use in the neighborhood of 20,000 board feet a month," Barefoot said, "not a tremendous amount of wood usage compared to the furniture or cabinet making industry, but certainly a significant volume when it is considered that this is a tedious and painstaking wood-working craft."

The business is not only unusual from the perspective of wood use, but also in terms of age and stability. The company was established in 1879 by

"WE'VE GOT A LOT OF HISTORY BEHIND US, BUT THE MAKING OF SADDLE TREES IS ESSENTIALLY THE SAME SPECIALIZED WOODCRAFT IT WAS A HUNDRED YEARS AGO."

Edward Flor, a German immigrant who turned to saddle tree making when he was unable to secure employment as a musician. The business has never changed locations and many of the current employees are third and fourth generation wood craftsmen whose parents worked for the firm.

Through the years, the business went through family and financial alterations. In 1975, Barefoot came to work with the organization as sales manager. Two years later he bought the company from the original Flor heirs and owned the business until he sold it to P.I. Inc. of Athens, Tennessee in 1987. Barefoot remained with the company and continues to manage it.

"We've got a lot of history behind us, but the making of saddle trees is essentially the same specialized woodcraft it was a hundred years ago," Barefoot said. "You have to know horses, saddles and wood."

A native of Pennsylvania, Barefoot came by his interest in horses as a result of cultural inheritance; he said his grandfather was a horse thief. "It may be just an alleged horse thief," said Barefoot with a laugh. "Nobody ever proved anything."

However, grandpa did carry on some suspicious activities. Although his home was in Pennsylvania, he maintained a homestead in Montana. Periodically he would go to Montana and return with a herd of the finest horses, which he would promptly sell to Pennsylvania's Amish farmers. There were those who wondered how grandpa could consistently come up with herd after herd of prime horses. Grandpa never gave any details.

Barefoot's interest in horses and woodcrafting finally surfaced and he went into the saddle tree business. He came to Georgia 21 years ago, after graduating from Mississippi State University where he majored in sociology and criminal justice. He joined the faculty of Brenau College in Gainesville, Georgia, but had all intentions of settling comfortably into a career of college professor. But after several years Barefoot came to the conclusion that academic satisfaction was not necessarily synonymous with financial prosperity.

"I had some experience with horse saddles and woodcrafting, so I went to work for the saddle tree company," Barefoot said.

Although he had some



At left, manager of Flor Saddle Tree Company, checks dimensions of Southern yellow pine saddle tree with customer. Established in 1879, the company is the only one of its kind in the state and possibly oldest such organization in the nation. At right, veteran saddle tree craftsman Earl Watson displays stack of wooden saddle trees ready for rawhide stitching and leather covering. Although it is not obvious by looking at the finished product, a saddle made of more than half wood. The requirements of this specialized woodcraft have changed little since the days of the Old West.



At left, Watson checks oak patterns for saddle trees. More than 600 wooden models are stocked by the Demorest based company. Many of the company's personnel are third and fourth generation craftsmen. Saddle tree craftsman shown above attaches horn to wooden saddle tree. Although automated tools are used, wood craftsmen spend as much time using sandpaper and a hand rasp as they do operating power tools.

knowledge of the field, Barefoot discovered the production of saddle trees was a new educational process in itself - a process Barefoot has now perfected into an art. One vital educational factor is wood selection. Barefoot now personally selects all wood used in the saddle trees. Yellow poplar is the primary source, but Southern yellow pine is also used. In selecting wood, he makes sure there are no remaining bark edges and that no wood falls below required dimensions. He prefers wood from native Georgia trees.

"Nothing too sappy or wide-grained," Barefoot said examining a new stack of lumber, "and, of course, all wood has to be of the best quality for our purposes."

MORE THAN 600 PATTERNS

The company maintains more than 600 saddle tree patterns. Barefoot said all patterns are made from oak for durability. He pointed out that some companies use plastic patterns, but he prefers the durable oak because wood patterns offer flexibility for changing models without the use of expensive molds.

"The flexibility offered by wood is important," Barefoot said. "Patterns change."

As the horse changed - patterns changed. Actual photos of the Old West show horses with angular backs that sloped off sharply on the sides. Despite the romanticized version of the horse in the Old West, these animals were often parasite-infested creatures suffering from poor nutrition. Current selective breeding practices and better care have produced healthier and sturdier horses - with rounded backs.

"Regardless of the shape of the horse," Barefoot said, "a good saddle must fit the top of the horse and the bottom of the rider simultaneously."

Company records show that an average of about 50 out of the approximate 600 styles are good sellers at any given time. Models range from the Texas Roper to the Modern Arabian. Custom made trees are also available. Prices vary according to model, but popularity of models seem to have little to do with price.

"It's just whatever comes along and influences the public to want a certain style," Barefoot said.

After the television mini-series "Lonesome Dove" Barefoot said he was flooded with orders for the A-Fork Old Timer Model. The series depicted actor Robert Duvall being chased on horseback across the desert by a group of undesirables. Duvall lost ground during the chase and was forced to kill his horse, wedge himself behind the saddle of the fallen animal, and shoot it out with the culprits. During the

"No matter how much woodworking technology improves, this is an art that boils down to using sandpaper and a hand rasp..."

shootout sequence, a series of close-ups, showing Duvall shooting over the dead horse, revealed unmistakably that the saddle was an A-Fork Old Timer Model. Using a saddle as a barrier was common practice in such gunfights because the wooden saddle tree provided an effective bullet buffer.

"Orders poured in," Barefoot said. "We had an Old Timer oak pattern left over from the 1800s, so it was no problem to fill the orders."

As Barefoot points out, there is no problem for the company filling orders if a pattern is available. However, finding skilled wood craftsmen in this field can be a problem. It is relatively slow and tedious work - especially in the latter stages - and one that is not quickly learned. The skill is often passed on within a family, from one generation to the next.

Although traditional woodworking skills are helpful to some degree, they have little to do with this craft. While cabinet and furniture makers deal mainly with angles and edges, saddle tree makers are primarily concerned with curves and radiuses of wood.

"No matter how much woodworking technology improves," Barefoot said, "this is an art that boils down to using sandpaper and a hand rasp. Much of this skill has to do with feel

and sight, and it can only be learned through experience."

High speed duplicating lathes and spindle carving are used to turn out masters and patterns. Spindle carving machines form the swells and cantle of the saddles. After each part is inspected and approved, the tree is assembled on a jig to insure correct dimensions and customer specifications. Horns are installed with rivets that run through the fork and into plate at the bottom of the gullet.

Prior to covering, each tree is hand rasped and sanded (formed) to insure smooth joints in areas where rawhide must fit perfectly. The tree is then dipped in a special solution that seals the wood and provides a foundation for rawhide covering.

Rawhide coverings of varying weights are used, depending on the type of tree being covered. After hand stitching, finished trees are air dried and varnished according to customer specifications. Trees are sent to saddle companies for leather coverings.

TIME TO GO FISHING

Saddle making requirements have not changed much through the years, but Barefoot said, changing times have changed the business. What was once a necessity has become primarily a leisure time item. Although saddles are still made for working cowboys and rodeo athletes, the major market is now elsewhere. This market transition has made the business increasingly vulnerable to recession.

"My personal theory of economics is that in times of recession - leisure time products are the first to go," Barefoot said. "At times we've been hard by recession, but we never let anybody off. We just went to a four day week and went fishing one day a week until it blew over."

When the recessions receded, it went back to saddle tree making as usual, the basics being virtually the same they were in the days of "Lonesome Dove." The mechanized part has improved, but the craft still relies on the wood craftsmen. Saddle tree woodworkers spend as much time with sandpaper and a hand rasp as they do with automated tools.

"That's why it remains just as much of a unique and demanding working craft as it was in the 1800s," Barefoot said, "and I don't expect it to change much in the future."

ASSOCIATION AWARDS DISTRICT, UNITS

The Georgia Forestry Association presented the Commission with a number of awards and honored the Logger of the Year at the recent Annual GFA Convention held on Jekyll Island.

Outstanding Service Awards were presented to the Irwin County Unit and the Lamar-Pike-Spalding County Unit. The awards were based on accomplishments in forest management objectives, as well as protection of forest lands from wildfires and other hazards.

An outstanding District Award went to District 10 with headquarters in Statesboro. District Forester Jerry Lanier and his

staff are responsible for Commission activities in the Bulloch County area. Overall superiority in all facets of operation are required for this award.

Charles Hill of Jeffersonville won the Logger of the Year Award. Hill, who has been logging for 18 years, gained experience while logging with his father. The Hill logging operation delivers 800 to 900 cords weekly. Hill, who holds a BBA in management from Georgia Southern College, sums up his philosophy of successful logging with what he terms "the five Ps - Prior Planning Prevents Poor Performance."

BASIC POINTS ARE DISCUSSED ON ENDANGERED SPECIES PROTECTION

Walter Jarck, corporate director - forest resources, Georgia Pacific, was interviewed recently on Cable News Network (CNN) with regard to a recent environmental ruling.

A judge in Texas has decreed that the red cockaded woodpecker (RCW), on the endangered species list and native to Southeastern pine forests, should have approximately 1,100 acres around each colony where only limited timber harvesting can take place.

On June 26, the U. S. Forest Service extended the Texas management plan to other national forests throughout the South. Although the ruling presently applies only to federally owned lands, it is believed to have future implications for privately held lands, affecting both industrial owners such as Georgia-Pacific and small landowners.

The National Forest Service had earlier determined that the RCW is adequately protected with 200 feet as a buffer. Recent research shows that the bird is hatched, lives and dies within 125 acres, a relatively short range for birds.

Jarck made several basic points during the interview, which took place at G-P's distribution center in Norcross:

"We have time to study and determine the needs of the bird. Thriving colonies have been observed close to clear cuts, along roads and in younger stands of timber. Our final judgment should be based on sound research that considers the needs of the bird along with the impact on jobs and state and federal revenues. The public in many cases has been given incomplete information.

"The ruling could result in higher prices for forest products passed on to consumers, but of even more importance is the great number of small timberland owners, whose average holding is about 100-500 acres. It could wipe them out.

"G-P abides by the Endangered Species Act, which means we avoid cutting all trees within an active colony of the RCW, as well as the trees in a buffer zone around the colony. We also avoid disturbance within the colony area during the nesting season, which is April through June."

Jarck, who is active in numerous forest product industry organizations, concluded with the summary that good forest management practices are good for wildlife as well.

*From "Atlanta This Week,"
Georgia Pacific Newsletter*



...nsery Coordinator Howard Stanley
...nds at the base of the largest Elliottia
... Elliottia racemosa Muhl.) tree in the
...ted States. Stanley and Forester Red
...tleman of the Commission's McRae
...istrict discovered the champion tree in
...ver swamp near Reidsville. Although
...as impressive as the mighty oak, this
...ll and slender tree puts other Elliottia's
...t the shade. The two finders were pre-
...red certificates of appreciation from
...te National Register of Big Trees for
...te discovery.

DADDY WAS A TURPENTINE FARMER

An admiring daughter looks back on the long career of her dad and fondly recalls the sense of values and abiding love of nature that he instilled in her as she worked as his helper deep in the forests of Southeast Georgia.

Archie Lee Bacon devoted fifty years of his life to the hard, honest labor of collecting raw gum from tens of thousands of pine trees and a daughter is grateful for the rewarding childhood experience of often having been his summer-time helper.

Margie Bacon DeLoach remembers the toil of the long days in the woods, but she also recalls the beauty and serenity of the forest: the shaded fishing hole, the wild berries and flowers, the secret places. Most of all, however, she remembers the admiration she had for her father and how he taught her, through example, about endurance, patience and character in general. She said he also instilled in her an enduring love of nature and the great outdoors.

"Daddy was always soaking wet with sweat from tramping so many miles through the woods each day. Heat rash, ticks, and redbugs were always nuisances to contend with, and mosquitoes and yellow flies, especially near the swampy areas, swarmed after him," said Mrs. DeLoach. "It was a miracle that he was never bitten by a snake."

Despite the many inconveniences, she said her father never complained; he looked forward to each new season.

"First, Daddy had to select new trees each year that were of proper size to be cupped and when the weather began to get warm, he would put the first streak on the tree, that is, he would chip the bark off a small section with a

tool called a hack" is Mrs. DeLoach's explanation for those not familiar with the industry. "A metal cup was fastened to the tree to catch the gum (or

sap) that ran out of the exposed streak and acid was sprayed on the cut to make the gum run faster."

Bacon, a native of Long County who



s approaching his 78th birthday, had a career that extended from 1920 to 1970. "He was always proud of his work and it took a lot of strength and will power to perform this hard job over and over throughout the many years," said his daughter. "It is a trade that has now almost vanished from the South."

PROUD OF WATER WHITE

She said activities picked up during dipping time - a time when Daddy would empty cups from the individual trees into big wooden barrels to be hauled to the naval stores market in Chesup, Glennville or some other town. I liked to see the ones marked "W/W." This meant it was Water White, the highest grade gum, and would bring the best price. Daddy was as proud of his top grade as a farmer would be with a blue ribbon Glennville onion. He received half the proceeds from the sale."

Mrs. DeLoach said "my sister and I occasionally had to help my brother and father work in the woods during the summertime. We would spray the acid on the trees after they stripped them. Daddy could squeeze the bottle with one hand, but it took both of mine. The wind would blow the acid back onto my face and arms and into my eyes and it certainly would burn. My clothes also needed patching after a day in the woods with the acid bottle."

She said "Daddy had a set pattern for going from one tree to another and in this way he seldom missed a tree. He knew the best way to get all the boxes worked using the least number of steps. After working in the woods since 1930 in the morning, we were ready for noon and we thought our legs would hold under us as we walked home for lunch. I think Daddy enjoyed our company as much as he liked us helping with his work. We learned to appreciate the hard work he did daily without grumbling.

TIME FOR BERRY PICKING

"Sometimes Mama and my two little sisters went with us and carried pails to fill with wild blueberries while we worked. When we finished the tract of berries on the spot, we helped them pick the ripe juicy berries. They were used to make delicious cobblers and blueberry muffins.

"If we were working near Pigott Branch, we would take our cane fishing

poles along to use after we finished working. I think this was Daddy's way of enticing us to work faster. Near the baptism hole was an old sawdust pile that furnished plenty of worms for fishbait and if we were lucky we would be able to take home a nice string of pike with our hack and acid bottle."

She said she learned to appreciate the woodlands of her native county at an early age and described one of her favorite places deep in the pine forest:

"The Beaver dam was always full of water and no one else but us ever went there. It was dark and spooky looking and beavers had it dammed in many places; we enjoyed looking at the freshly gnawed trees across the water. Catfish bit well in this place and I had a favorite spot in a tree with a low branch that extended over the water. This made an excellent spot to sit and fish and there was a clear hole near the

One lady just had to feel the tar. "Imagine her surprise when she stuck her hand into the dip bucket and tried to pull it out. Daddy just laughed."

dam that we used to swim in until we heard the gator bellow!"

Mrs. DeLoach said her father was very close to nature and knew every path through the hundreds of acres of woodland. He recognized all the different animal signs and tracks and was aware of anything unusual that had happened since his last visit.

She also explained why he probably escaped being bitten by a snake. "Fido, his small black cur dog, was his constant companion. He followed him everywhere and he bayed rattlesnakes when he found them. Daddy could tell by the tone of his bark when he had a snake at bay. Fido would not stop barking until Daddy went to him and killed the snake. At the sound of thunder, Fido quickly ran to him and barked. He wanted Daddy to quit work and go to a shelter."

After the gum running season, the

trees had to be scraped. All the tar that had struck on the face of the trees throughout the season had to be scraped off. Pine straw and trash were mixed in it. "Scrape" brought the lowest price.

Out-of-state tourists travelling on U. S. Highway 301 would sometimes stop to see what was happening to the trees at the edge of the woods. One lady just had to feel the tar. "Imagine her surprise when she stuck her hand into the dip bucket and tried to pull it out," said Mrs. DeLoach. "Daddy just laughed at her."

When the scraping was finished, the trees had to be weeded. "This was our after school chore and we were paid one penny per tree," Mrs. DeLoach said. "Each tree had to be cleared of weeds around its trunk to keep it from catching fire." The woods were burned each winter to keep down the underbrush, ticks, and snakes. "I always enjoyed watching the roaring flames march across the woods knowing it was controlled and I knew that soon new green grass would cover the blackened ground and purple dogtooth violets would be easily spotted for the picking," she said.

WELL DESERVED REST

The daughter said her father was "always on the go and seldom stopped to rest" during his half century of work in the forests. Now that he is finally enjoying a well deserved life of leisure, she painted this poignant word picture:

"Time passed and Daddy had spent fifty years in Long County working turpentine for the Baxters, Howards, and Parkers. His steps had slowed and his vision had blurred. Retirement was due. Daddy moved to Darien several years ago and now spends time with his wife, Bessie, working in the garden and sitting on a five gallon bucket beside a saltwater creek waiting for the fish to bite.

"As he sits there silently and patiently waiting, I'm sure that his mind must travel back to the thousands of miles he has spent in the southeastern Georgia woods. As he approaches 78 years of age, his health is still fairly well. His large strong hands and deeply tanned face and arms reflect the many long, hard hours he has spent outdoors. He seems as much a part of nature as a tree itself--strong and sturdy!"



Forestry students Stacey Drake, left, and Stanley Wallace surprised some landowners in mountainous North Georgia during the summer as they placed strange little gadgets on many hardwood trees in the region. The traps will determine how many scouts are crossing the state line in advance of an expected gradual invasion of the gypsy moth. The two encountered some hostile landowners, but most were friendly and appreciative of the project they were carrying out.

NORTHERN PESTS HITCHHIKING SOUTH

By Gwendolyn Gordon

A driver backs out of his driveway and is startled to find that the street is covered two to three inches deep with something so slippery and dangerous to drive on that he thinks it could be snow or ice. But in reality, it's the middle of the summer, and the street in front of his house isn't iced over, it's teeming with gypsy moth caterpillars!

This scene is common in New England and other Northern states. The gypsy moth caterpillars cause a

number of highway accidents, swarm houses and yards, and even crawl through people's hair and clothing every summer.

Georgia's problem with this pest isn't that serious--at least not yet. The moths are, however, migrating further South each year. Unknowingly, Northerners vacationing in the South provide the main method of transportation. The pests lay their eggs on cars, mobile homes, and campers. Once in a campground, picnic area, or other

wooded site, the moths find a new home.

Two forestry students from Abraham Baldwin Agricultural College are tracking the progress of the gypsy moth in the northern part of the state this summer for the Georgia Forestry Commission. Stanley Wallace, who has performed his job for three seasons, is responsible for District One and works out of Chattooga County, while Stacey Drake, working on his second season, patrols District Two and works out of

Franklin County.

The two cover 21 counties and said they have set approximately 1,300 traps in both districts. The traps have a female scent that attracts the male moths.

Besides being a nuisance, the gypsy moth represents a danger to Georgia's forests. In the caterpillar stage, the pest strips trees of their leaves. This slows tree growth, and they can damage thousands of acres of trees in a period of a few days. The gypsy moth prefers oak trees, but will eat most any type of hardwoods. The trees eventually die after being attacked for several years.

CANKER INCREASES PROBLEM

Commission Entomologist Terry Price said he feels the situation may become serious in the South because of a naturally occurring disease on oak trees, hypoxylon canker. The disease normally feeds only on dead bark tissue, but when a tree is stressed by the gypsy moth, it begins to feed on the healthy tissue, thus killing the tree more rapidly, he explained.

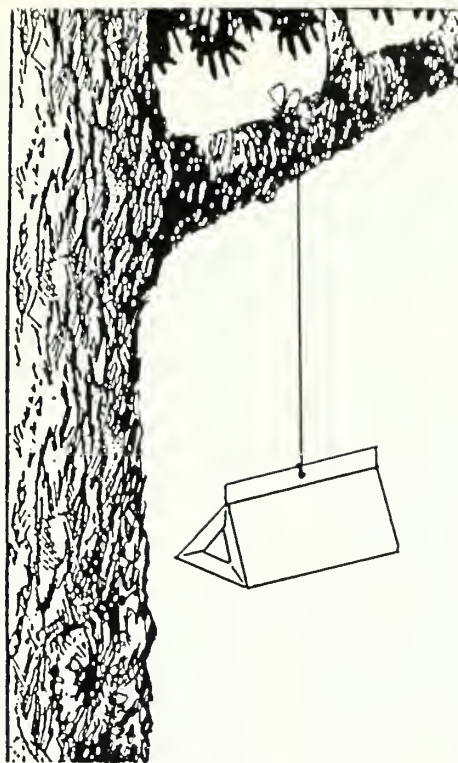
"The moth weakens the trees so that the fungus becomes aggressive. The weather in the South is much more conducive to fungal growth and one year could be all the time it takes for the moths and the fungus to kill a tree, whereas a tree up North could survive for three or four years," Price said.

The gypsy moths are in an egg form during the winter, and become larva in the spring. They defoliate trees for about ten weeks as they grow into adult caterpillars and come forth as moths in middle to late summer.

Wallace and Drake said they are keeping a close watch on popular recreation sites in Georgia, such as Helen and state parks. They have hung 20 to 30 traps around the outskirts of Helen, and approximately 80 traps within a square mile inside the town. A grid system is normally used to determine where to set traps, but popular tourist areas are much more concentrated.

"We have a lot of tourists around Helen, and the number of moths we have caught there has tripled since last year," Wallace said. If more than one moth is trapped in an area, then one square kilometer around the site is divided with several hundred traps to determine if there are others in the area.

The traps help us locate infes-



tations while they are still small enough to eradicate easily. More than one moth in a trap is a good indication of an infestation," Price said.

The students set traps on private as well as public lands.

"We have the right to go on anyone's land, but we try to get in touch with the owners first. Usually, as soon as we explain what we are doing, landowners are glad to let us do our work," Wallace said. Drake added that some owners are so grateful for the help in locating and controlling insects that they have been invited to go fish-

ing after work.

Some, however, are not so glad to see the men. They haven't been shot at yet, but have heard some strong language from landowners thinking they are trespassers. Campers are sometimes wary of them also.

"Some of them think we're game wardens. They get really nervous and want to know if we need to see their fishing licenses," Wallace said. "One woman wanted to know if she could have one of the traps to use as a roach trap."

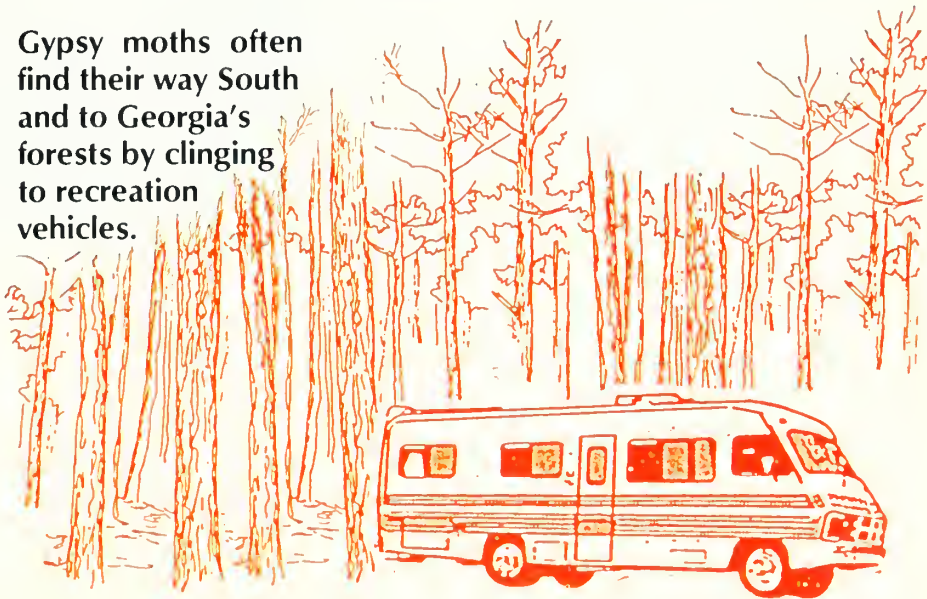
INTRODUCED BY BIOLOGIST

The moths were first brought to the United States by biologist L. Trouvelot in 1869. The scientist wanted to interbreed the gypsy moth with the silk worm, but many escaped from his lab in Massachusetts and established themselves in the New England states.

Research has been conducted on viruses and bacteria that have been shown to kill the gypsy moth. While scientists have been able to reduce them with insecticides, the sheer number of moths makes total eradication very difficult.

Although the two trapsetters have been cursed and accused of trespassing, both are still fascinated with the state's forests and said that most of the mountain folk are very pleasant. As the gypsy moth travels closer to Georgia, it is becoming necessary to inspect the forests even more carefully. With patrolmen like Drake and Wallace on the front line, Georgia will stay on top of the problem.

Gypsy moths often find their way South and to Georgia's forests by clinging to recreation vehicles.



MISS GEORGIA FORESTRY

Kathryn Leigh May studied brochures, reports and other material on forestry to be prepared for tough questions from the judges when she competed against 46 other young ladies for the Miss Georgia Forestry crown.

"Guess what," she said, "they didn't ask a single question about forestry." But that's okay. She won the title and came away with a \$1,000 scholarship, and an opportunity to represent forestry in parades and at festivals across the state and, of course, a fairly good knowledge of basic forestry!

After she was crowned by Kay Ellenburg of Greensboro, the retiring Miss Georgia Forestry, at the conclusion of the statewide pageant on Jekyll Island, the new queen set out for Jacksonville to catch a plane for Houston. "In Houston," she said, "I began singing my way back to Georgia."

The 17-year-old daughter of Debby and E. K. May of Tennille explained that she is a member of the Sandersville United Methodist Church Youth Choir and the singers were on their annual tour of Texas, Louisiana, Mississippi and Alabama and she said "I had to catch up with them."

SWAMPED WITH CALLS

While Kathryn was singing in churches across four states and making the bus trip back home, her mother was swamped with phone calls of congratulations to her daughter. Some businesses around town displayed banners proclaiming the good news and the local newspaper was on a deadline when the word came from Jekyll, but managed a front page bulletin with promise of a full story in the next edition.

Kathryn, who represented Washington County and was sponsored by local merchants in the state finals, also captured the Miss Congeniality title. Frank Craven of Macon, coordinator for the pageant, said he has been involved in the event for more than 20



years and "it's the first time I have known a girl to win both honors."

FASHIONS INTEREST

The new Miss Georgia Forestry, a rising senior at the Brentwood School, plans to study fashion merchandising at a college yet to be chosen. She has worked in her grandmother's dress shop in Macon and accompanied her to the big Apparels Merchandising

Mart in Atlanta on several occasions to view the latest fashions.

Forest Ranger William Pate of the Commission's Washington Count Unit said this is the first year the unit was able to have a county-level pageant on its own; it was previously tied in with a neighboring county. "It was our first year," he said, "and we came in first. We're all very proud of Kathryn and appreciate all who sup



...rted our local pageant."
 ...econd place winner in the pageant
 ...s Julie Ann Bagwell, 19, daughter of
 ...arles and Roxie Bagwell of Cordele.
 ...honor student at Georgia Southern,
 ...represented Crisp and Dooly
 ...unties in the competition. She said

...her ambition is to eventually become a
 ...medical doctor and to have a success-
 ...ful practice and family life.
 ... Laura H. Windham of Grady County
 ...was second runner up, and Michelle
 ...Rabun of Richmond County was third
 ...runner up in the annual competition.

Clockwise: Arranging flowers with mother, chatting with Washington County Forest Ranger William Pate, relaxing on the front porch with a good book, getting a little practice on the keys, posing with dad.



WOODEN BRIDGES MAKING COMEBACK IN GEORGIA

Wooden bridges are making a comeback in Georgia and numerous states across the U. S. as engineers merge wood technology with new designs.

The Commission's research department pointed out that several wood engineered bridges are in various stages of design and construction in Georgia. The bridges include a structure over a U. S. Forest Service access road in White County, a Habersham County bridge that the board of Commissioners are building in cooperation with other government agencies, and a Putnam County bridge involving federal, state and county funds. Also, an experimental bridge is being planned for construction on Commission property near Augusta.

Construction of wooden bridges has become so commonplace that the U. S. Forest Service now has a Timber Bridge Program. The Commission's research division has projects under study and analytical interests in many more. Department personnel consider wooden bridges ideal for secondary roads.

Economic indicators confirm the increasing interest in wooden bridge construction is not a whim of nostalgic aesthetics. Solid financial and engineering factors are involved.

Designers of the new wooden bridges confidently claim their structures will support the same 40-ton trucks that cross steel and concrete bridges. They also point out that wood lasts longer and is easier to maintain.

However, there is an inevitable obstacle to overcome - the psychological rut of dismissing wooden bridges because they seem outdated. Many of those of who would make wooden bridges the crossings of choice consider this psychological impediment as the most difficult problem, since most U.S. engineers have been trained to work with steel and concrete.

Although timber bridges have long been used in the nation's remote areas, acceptance has been sluggish in urban sections. However, a million dollar federal project geared to construct 80 wooden bridges in various states could create a more positive perspective.



Miss Dixon is congratulated by Jim Gillis, Jr., President of The American Turpentine Farmers Association.

NEW MISS GUM SPIRITS CROWNED

Christian Elaine Dixon, 17, daughter of Jimmy and Patricia Dixon of Vidalia, was crowned Miss Gum Spirits at the annual convention of the Georgia Forestry Association. She will represent Georgia's important naval stores industry for a year. She was chosen from among the state's gum producing counties.

Christian is a student at Vidalia High School, where she received the English Award, and is a majorette in the school band. She is a member of the youth Council

at Tabernacle Baptist Church.

Miss Gum Spirits was crowned by the 1988 winner, Jana Rodgers of Folkston. She represented Toombs County at the pageant and her ambition is to pursue a career in dentistry.

Christian also was crowned Miss Toombs County Forestry and competed with 46 other county winners for the title.

As Miss Gum Spirits, her photo will appear on the official calendar of the American Turpentine Farmers Association.

OCTOBER HERBICIDE WORKSHOP PLANNED

A Forest Herbicide Prescription Workshop will be held on October 3-4 at the Georgia Southern College Conference Center in Statesboro.

Planned by the Cooperative Extension Service in cooperation with the Georgia Forestry Commission and the U. S. Forest Service, the workshop is designed to help foresters, landowners, and vendors do a more effective job when using herbicides, according to officials.

The U. S. Forest Service predicts a 40 percent increase in the demand for pine pulpwood and a 12 percent increase in pine sawtimber needs by the year 2030, thus causing herbicides to become an economically important tool to land-

owners. Herbicides are needed to improve survival and growth by getting rid of competing weeds and brush.

The workshop will be directed by experts in different areas of herbicide use speaking on the first day. The second day will be spent in the field, with participants developing herbicide application prescriptions.

Pesticide recertification and CFE credit will be given and applicator tests can also be taken if requested.

For pre-registration forms and additional information, contact the county Extension office, any Georgia Forestry Commission district office, or Lamar Merck at 912/681-5630.



Laura Newbern of the Georgia Forestry Association, left, Sue Shaddeau, representing The American Forestry Council, center, and Sharon Dolliver of the Georgia Forestry Commission, displaying national award.

URBAN FORESTRY SETS FIRST STATE MEETING

The Georgia Urban Forestry Council will hold the state's first Urban Forestry Conference and Awards Program on November 15, 1989, at the Macon Hilton.

The purpose of the conference is to promote effective management of urban forestry resources throughout Georgia. Those attending from sections throughout the state will include various city managers, arborists, mayors, city council members, and urban foresters.

The meeting will focus special emphasis on global warming. Neil Sampson, executive vice president of the American Forestry Association, will deliver a keynote speech on global warming and the association's relief program.

LEARNING TREE GIVEN NATIONAL AWARD

Georgia's Project Learning Tree recently received a national award for being the most outstanding program, according to sponsors of the environmental educational program for students.

The award was given for the great number of workshops administered in Georgia, the quality of video presentations and other activities involved in training more than 1,100 teachers and foresters. Learning Tree is taught to students in grades K to 12 in many schools throughout the state.

The award was presented by the American Forest Council at the National Learning Tree annual conference in New Hampshire and it was accepted by Forester Sharon Dolliver of the Georgia Forestry Commission. The program is sponsored in Georgia by the Commission, Georgia Forestry Association and the Extension Service.

Coordinators include Dolliver and Laura Newbern of the association.



ARBORETUM IS MEMORIAL TO BUSCH

The Darrell A. Busch Memorial Arboretum at the Ernst Brender Demonstration Forest near Macon is named for a young forester who worked with high skill and enthusiasm prior to his untimely death earlier this year to make the area an interesting attraction for visitors.

A ceremony dedicating the project to Busch was held recently and his widow, Miriam, and young son returned from their home in Erie, Pennsylvania to attend. Commission and U. S. Forest Service officers said the arboretum will be a living tribute to the forester and praise him for the contributions he made toward establishing a permanent project that will benefit generations to come.

Busch was coordinator of the Demonstration Forest and the arboretum was his favorite project. He made sure that it contained trees both native and non-native to the region and signs were posted by each so that visitors may learn about them.

A native of Vallejo, California, he was first employed by the Commission as a forester with the Gwinnett County Unit in March 1987. Five months later he was transferred to the demonstration forest as coordinator.

ASSOCIATION ELECTS GEORGIANS

W. C. Frazer III of Albany, Chairman of the Board, F&W Forestry Services, is the new president of Forest Farmers Association and three other Georgians also currently hold offices in the organization.

Frazer was named to the post during the recent annual meeting of the organization in Little Rock, AR. He succeeds A. Kent Van Cleve of Mississippi.

Other Georgians holding association offices include Noll A. Van Cleve of Columbus, regional vice president; N. A. Hardin of Forsyth, new director; and G. W. McVickers, Jr. of Atlanta, elected director.



Friends of the late Pat Thomas hear tributes to the national forest supervisor during ceremonies dedicating and naming a new visitor center in his memory.

NEW VISITOR CENTER NAMED IN MEMORY OF PAT THOMAS

An attractive visitor center to picturesque Anna Ruby Falls in the mountains of White County was recently dedicated to the late William (Pat) Thomas, who served as supervisor of the 860,000-acre Chattahoochee-Oconee National forests.

Several speakers told of the forester's dedication to the protection and preservation of the forests. He was praised for always insisting that the general public had a right to determine how the national forests were to be managed.

Thomas was a native of the North Georgia mountains and friends and co-workers said he loved the special people and places of the region. They said he sought to preserve the quality of life found in the mountains while managing the forests for both present and future generations.



A large crowd attended the Saturday morning ceremony to hear Congressman Ed Jenkins pay tribute to Thomas. Forest Supervisor Ken Henderson welcomed those attending and opening remarks were made by Regional Forester John Alcock and Deputy Chief William Rice. Dedication of the Pat Thomas Visitor Center was presented by Helen Thomas and James Mathis, with the Chattahoochee-Oconee Creed presented by Gil Massie, recreation staff officer.

In his remarks, Alcock said "My friend, Pat Thomas, devoted his professional life to the protection and management of our National Forests. His work made a difference and left a legacy to present and future generations." Massie said "Pat's stewardship of the Chattahoochee-Oconee National Forests is a living message he sent to a time he will not see."

The new visitor center is at the entrance to a canyon that leads to Anna Ruby Falls. The twin waterfall is visited by more than 250,000 persons each year, according to the U. S. Forest Service.

ARRESTS MADE IN FOREST FIRE CASES

A North Carolina man was sentenced to serve 90 days in federal prison for setting fires which burned onto National Forest land.

The fire in Georgia burned approximately seven acres within the Chattahoochee National Forest boundary near the Gilmer/Murray County line.

In addition to serving prison time, the man will have to pay \$1,149 to cover the total cost of suppressing the fire, according to Forest Service Special Agent L. Burril.

A Rabun County man early this year was sentenced to serve five years in prison and pay \$37,000 in restitution costs for an arson fire that burned 20 acres of National Forest land.

REUNION PLANNED

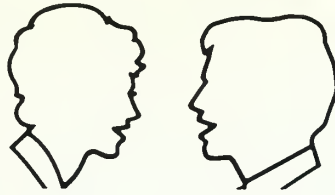
The first GFC Retirees Day - a day set aside to honor all persons who have retired from the Georgia Forestry Commission - has been scheduled for September 29 at the Georgia Forestry Center in Macon.

The program will begin at 11:00 with a welcome by John Nixon, Commission Director, followed by an address by state Senator Waymond (Sonny) Huggins, a former forest ranger in Walker County and a member of the planning committee for the event. He will discuss the status of legislation concerning income tax on retired state employees.

Randall Perry of Atlanta, the Commission's personnel director, will speak to group on general retirement benefits and field any questions that might be asked.

Frank Craven of Macon administrative secretary of Georgia District of Kiwanis International and former chief of the Commission's Forest Education Department, who is also a member of the planning committee said the retirees will have lunch on the Forestry Center grounds.

PEOPLE



In The News

WILLIAM F. (BILL) CORLEY who has been with the Commission for over 32 years, was recently honored with a retirement dinner. He spent his entire career at the Walker Nursery, and many co-workers, friends, and family gathered to express their con-



CORLEY



STEWART

ratulations and thanks for his service. Corley developed many close relationships with forestry personnel and friends in other agencies during the years and his supervisor said he will be missed by those visiting Walker Nursery...Forester DONNA STEWART, native of Canada who grew up in Oklahoma and earned a degree in forestry from Oklahoma State University, has joined the staff at the Stone Mountain office to work in urban forestry. Her family moved from Calgary to Oklahoma City when she was a child and later moved to Mustang. The forester is a member of the Society of American Foresters. She enjoys hiking, camping and horseback riding. She has performed in several rodeos...Ranger AROLD SMITH of the Columbia County Unit retired in July after a 32-year career with the Commission. The ranger, who is succeeded by Ranger J. TOWNSEND who transferred from Burke County, was honored at a



SMITH



PLACE

farewell party given by Richmond County officials, including commissioners, department heads and others. A second party was given by his co-workers and other Commission personnel. Smith, a native of Richmond County, and his wife, Freda, who also recently retired from her work, plan to travel and work in woodcrafts. The couple has six married children and several grandchildren...Retired Commission Forester CHARLES (CHUCK) PLACE was one of 11 Soil and Water Conservation Society members to receive the national Outstanding Service Award for 1989 at the organization's recent awards meeting in Canada. Place was cited for his work in conservation workshops in Georgia for 26 years which were attended by more than



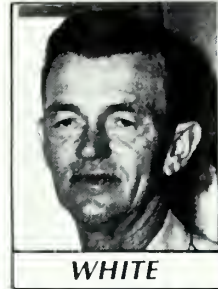
DILLS



HOLLOWAY

7,000 students...SADIE DILLS, formerly a senior patrolman with the Barrow/Jackson unit, has been promoted to ranger with Forsyth/North Fulton unit. She was employed by the Commission in 1985 as a patrolman with the Barrow-Jackson unit. A native of Pell City Alabama, Dills is a graduate of Pell City High School. She also attended Gainesville Junior College as an accounting major...JAMES B. HOLLOWAY, JR., a native of Metter who served as a patrolman in Jenkins County since coming with the Commission in 1984, has been named forest ranger of the Burke County Unit. The new ranger, a graduate of Metter High School, attended South Georgia Junior College in Douglas. Holloway and his wife, Lynelle, are active in Charlton Grove Missionary Baptist Church in Collins...

RANGER WILLIAM L. WHITE, who headed the Walker County Unit since 1982, recently retired after 35 years of service to the Commission. White is a native of Walker County and a graduate of the old West Armuchee High School. The ranger, who was given a farewell party in Rome by fellow employees and other friends, lives with his wife, Hazel, and son, Lee, on a farm in Walker County...ALTON



WHITE



RODGERS

RODGERS, who has served as a patrolman in the Walker County Unit since 1965 was named to succeed White as ranger. The new ranger is a native of the county, a graduate of Walker County High School and an army veteran of the Vietnam War. Rodgers and his wife, Gail, have two daughters, Jamie and Katie...HOWARD STANLEY, nursery coordinator for the Commission, has retired. A native of McRae, Stanley was employed by the Commission in 1957 as an assistant nurseryman. In 1958, he was promoted to nurseryman and became nursery superintendent in 1966. Five years ago, he was named nursery coordinator. Stanley and his wife, Lynease, reside in Reidsville. They have two sons, William and Lee. A plaque for faithful services was presented to the retiree by Director John Mixon...D. JOEL PRICE, son of Ranger Donnie Price, Emanuel County Unit, was named the 1989 F & W Young Forester of the Year for Outstanding Achievement at the 4-H Congress. The youth was presented a \$500 college scholarship by the F & W Forestry consulting firm, with home office in Albany.



STANLEY



PRICE



Good forest management in Georgia means more than good trees. Among many other things, it means cleaner, clearer water. Trees growing along the creek and river banks and at the rim of lakes filter sediment and prevent the run off of soil and pollutants into the water. Trees help maintain habitat for wildlife and enhance boating, fishing and swimming at many recreational sites around the state. Trees make a difference!

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Georgia

FORESTRY

Winter, 1989

**BEETLE TRAPS AID IN
POPULATION PREDICTIONS**

**VETERAN GFC PILOT
MAKES FINAL FLIGHT**

**PINE SHINGLES GAIN
IN MARKETPLACE**

FEATURE PHOTO



Historic ruins of Marietta Paper Mill still offer a solid reminder of Georgia's early paper making enterprise. Records indicate the mill was constructed near Marietta on Sope Creek between 1853 and 1859. Following incorporation in 1859, more records were kept that give a detailed description of the mill's operation.

Initially, the mill made paper for tissue, writing, printing, and wrapping. During the Civil War, the mill also produced stock paper for printing Confederate currency and bonds. However, in 1864, the mill was burned by Union troops moving over from Kennesaw Mountain.

Despite the burning, owners did not forget the success of the operation and rebuilt the mill after the war. By 1868, the mill was in full and prosperous operation again. However, misfortune continued to plague the mill; it burned again in 1870.

What was left of the mill was sold to James Brown, who rebuilt the mill and incorporated it again in 1874. It was at this Sope Creek mill, during the 1870s, that probably the first sustained and successful efforts in the United States to manufacture paper from Southern pine took place. The pulp was made from shorleaf and loblolly pine. This was one of the early efforts to utilize Southern species in the manufacture of paper. (*Georgia Archives Photo.*)

ON THE COVER - Gaunt red oak, in its leafless stage, reflects bleakness of winter in Atlanta's Buckhead section. Oaks, in general, are ideal urban trees - strong and sturdy sentinels that blend well with city environments. The Commission, which initiated the nation's first statewide urban forestry program, sustains a large scale operation for the Atlanta area.

Georgia

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Members of the Property Tax Assessment Sub-Committee hold a public hearing in Macon. The state legislators are, left to right, William J. Dover, Tom Crosby, Richard Royal, Bill Barnett, Ralph Balcolm and Frank Stancil.

LANDOWNERS PROTEST TIMBER TAX PROPOSAL

"If the ad valorem tax is enforced, the property owner will lose his incentive to produce timber," C.M. Stripling of Camilla, National Tree Farmer of the year in 1987 and tree farmer for 50 years, said recently to a large group of Georgia landowners and a panel of state legislators gathered at the Georgia Forestry Center in Macon.

The meeting concerned the dilemma of standing timber in Georgia being taxed separately from the land. Representative Richard Royal, chairman of a sub-committee of the House Ways and Means Committee, Georgia General Assembly, and other panel members listened to private landowners state what the re-assessment would mean to them. The other legislators included Rep. Frank Stancil of Watkinsville, Rep. Ralph Balcolm of Bainbridge, Rep. Bill Barnett of Cumings, and Rep. Bill Dover of Oakesville.

The problem the landowners are facing surrounds the definition of "real property." Timber is considered, by law, to be real property -- such as barns, tractors, irrigation systems, etc., thus, subject to ad valorem taxes. Unlike other crops grown in Georgia, timber is taxed every year. The average time span for a pine to reach maturity is 35 years. With the current tax laws, the trees are taxed 34 times in addition to the federal income tax levied when timber is cut and sold.

Walter Evans of Screven County explained that he fears the private forest landowner is not being treated fairly under the present rules. The landowner who plants trees is taxed every year the trees are growing. All other agricultural crops are not taxed since Georgia law fails to

in 1986 also affected the financial security of citizens involved in the timber industry. Prior to 1986, timber sales could be listed as capital gains, with only 40 percent of the income derived from timber sales being taxed. In 1986, with the entire restructuring of the tax laws, 100 percent of the income from

C. M. STRIPLING, PROMINENT SOUTH GEORGIA TREE FARMER, ADDRESSES PANEL



require ad valorem tax on crops grown and harvested in the same season.

Evans stated that "by 1991, all counties in Georgia will have to comply with inventorying all timber for the purpose of ad valorem taxes. This will have a devastating effect on landowners holding timber to maturity or reforesting land that has been cut over."

In addition to the ad valorem tax, the change in the capital gains tax laws

timber sales is taxed. This income is still listed under the capital gains category where it is not taxed for social security, but no longer is there a 60 percent tax free profit to entice landowners to invest in the future by planting timber.

Lynda Beam, a private forest landowner from Savannah, reminded the subcommittee that timber growers must regenerate the forests after harvests. "Trees utilize carbon dioxide

and give off oxygen," Beam said. "Trees are more than the raw material for our many industries, they purify our water, conserve our soil, and give us fresh air to breathe."

She said planting trees is also one of the best things that can be done to help reverse the global warming trend.

John W. Mixon, Director of the Georgia Forestry Commission, told the legislative committee that forestry contributes \$8.7 billion to Georgia's economy annually and provides more than 80 thousand jobs, with the potential to continue to expand if reforestation is supported and pursued.

"The redefining of the capital gains law and the new interpretation of the state ad valorem law," Mixon said, "is certainly discouraging Georgia forest landowners from regenerating their harvested areas."

Mixon pointed out that Georgia is harvesting more pine timber than it is growing each year and the trend must be reversed if forestry is to remain the state's single largest industry.

Georgia's forests are a subject of pride and beauty for the state, as well as a crucial element in the state's economic prosperity. As a business, the Georgia timber industry cannot survive and expand under the tax laws in question. Revisions of the laws, with the future of the state in mind, must be made in order to keep Georgia's economic prosperity secure, according to those attending the hearing.

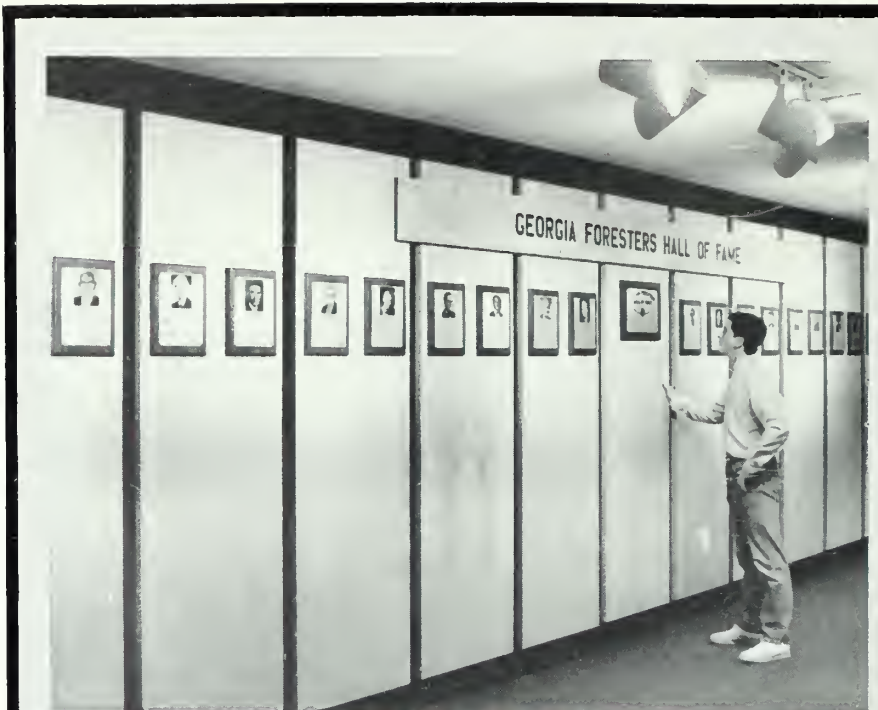
ARBOR DAY PLANS SET

Arbor Day in Georgia is February 16 and citizens around the state are again being urged by the Georgia Forestry Commission to participate in a tree planting ceremony in their community or at least plant a tree on their lawn or other property.

Teachers in public and private schools are asked to plan classroom programs and schoolyard exercises in observance of the annual day set aside to focus attention on trees and the contributions they make to the state.

The Commission each year provides forest brochures to teachers as a guide for student participation.

Teachers and others requiring additional information should contact the nearest Commission office.



Plaques honoring foresters displayed in new quarters.

HALL OF FAME DEDICATED

"They were the few who were willing to go the extra mile to help young students learn their trade, to be innovative in their approach to forest management and to be on the cutting edge of research in forest technology," said Tom Gilpin, chairman of the Georgia Division of the Society of American Foresters, at the dedication ceremony of the Georgia Forester's Hall of Fame in the University of Georgia School of Forest Resources.

"The members of the Hall of Fame represent forestry at every level in state and national agencies, private industry, and research and academic institutions," Gilpin said.

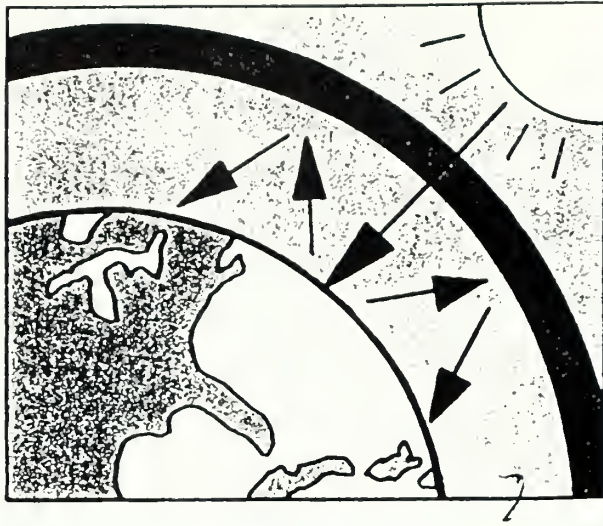
The Georgia Division of the American Society of Foresters sponsors the Hall of Fame, which honors current and former residents who have made outstanding contributions to the forestry profession.

Gilpin said "they are recognized by their colleagues as pioneers in their respective fields."

Although the first inductions were made in 1969, the Hall of Fame had no permanent home until recently when a section in the School of Forestry was dedicated to that purpose.

The 43 members of the Georgia Forester's Hall of Fame and their year of induction are: **1969**, George Norman Bishop, Inman F. Eldredge, Charles Floyd Evans, Bishop Franklin Grant, Burley M. Lufburrow, Henry J. Malsberger, William M. Oettmeier, Bonnell Harold Stone; **1970**, Allyn M. Herrick; **1971**, Ernst Victor Brender, C. Dorsey Dyer, James D. Strange; **1972**, Basil Ernest Allen, Charles A. Connaughton, L. W. R. Jackson; **1973**, Herbert Clay Carruth, Ben C. Meadows; **1974**, Frank A. Bennett, Sydney B. Kinne, Jr.; **1975**, Harry Guyton DeLoach; **1976**, John Warner Cooper; **1977**, Jack Truett May, William H. McComb; **1978**, Douglass A. Craig; **1979**, Archie E. Patterson; **1980**, Robert W. Cooper, James F. Spiers; **1981**, William A. Campbell, John Sisley, Vernon Yow; **1982**, George A. Anderson, Leon A. Hargreaves Jr.; **1983**, John C. Barber, Frederick W. Haeussler, Charlie Bonner Jones; **1984**, Jerome L. Clutter; **1985**, Claud L. Brown, Theodore W. Earle Sr., J. Walter Myers Jr.; **1986**, H. Edward Ruark; **1987**, L. W. Eberhardt Jr.; **1988**, Harley Langdale Jr., William Patrick Thomas.

**...THE EARTH'S CLIMATE
MAY CHANGE MORE DURING
THE NEXT GENERATION THAN
IT HAS IN THE LAST 15,000
YEARS.**



STATE FORESTERS STUDY GLOBAL WARMING TREND

Forestry, as a measure in controlling global warming, was the main topic at the recent annual meeting of the National Association of State Foresters, according to John W. Mixon, director of the Georgia Forestry Commission, and an attending member of the NASF.

He said it was emphasized in a position paper at the meeting that the earth's climate may change more during the next generation than it has in the last 15,000 years due to fossil fuel combustion and industrial and agricultural activities that have already committed the planet to significant warming. It is a fact that the four warmest years of the century have all occurred since 1980.

The cause for these major changes in the earth's climate is the "greenhouse effect," which is the action caused by a blanket of atmospheric gases that surrounds the earth and provides a thermal trap allowing solar energy to pass through while at the same time trapping the longer wavelength radiation emitted back from the earth's surface. Without this protective layer of gases, the earth would be covered in ice.

Carbon dioxide is the major component of the greenhouse gases. Current worldwide CO₂ emissions total an estimated 5.5 billion tons from fossil fuels, and another one billion tons from slash and burn operations in the

tropics. Energy use and production, along with use of chlorofluorocarbons, are the primary contributors to global warming in the 1980's and account for 75 percent of the total warming activity. From these statistics, it is obvious that the most important thing world society can do to reduce global warming is to reduce energy consumption, according to the paper.

The second most important thing is to increase the amount of carbon tied up in long-term carbon sinks like trees and wood products and this is where forestry plays an important role.

The U. S. forests currently contain 12 billion tons of carbon. The carbon is bound until trees are burned or decay or until products made from trees are burned or decay.

Some other observations from the paper:

Since about one half of the dry weight of wood is carbon, trees serve as effective carbon sinks. One tree will absorb 13 pounds of CO₂ per year and a fully stocked acre of trees will absorb 5,200 pounds of CO₂ annually.

One approach to reducing carbon emissions is to enhance the productivity of existing forestlands to maximize carbon absorption and to harvest older mature trees and replant, because a healthy young stand of trees absorbs more CO₂ than a mature stand that has stopped growing at a fast rate.

Greatly increasing the utilization of durable wood products in manufacturing,

commerce, and industry is another approach to controlling the global warming problem from the forestry perspective. New markets and new uses for durable wood products, such as timber bridges, wood foundations, wood houses, wood flooring and other products that meet practical needs but also serve for long-term carbon storage are needed.

Programs to increase urban forests must be put into effect. Not only do trees in urban settings absorb carbon dioxide and give off oxygen, but they shade to reduce heat gain, provide wind control to reduce heat infiltration, and provide localized cooling through evapotranspiration.

Existing and future forests must be protected from harm. Although wildfire probably affects global warming the most because it produces a nearly instantaneous release of large volumes of CO₂ to the atmosphere, widespread forest insect and disease epidemics which kill entire forests are nonetheless dangerous because the result is a huge accumulation of forest fuels which can contribute to wildfire.

Trees can play a major role in reducing the severity of global warming. Research that addresses how best to plant and grow trees and utilize the world's forest resources to increase the carbon sink is necessary and immediate.



Norcross home, owned by Ron W. Key, is typical of reroof jobs replacing Western red cedar with treated Southern yellow pine shingles. In spite of heavy rains, tear off and replacement required only two weeks - indicating ease and efficiency of pine shingle application. Pine shingles are uniformly cut and time consuming node removal is not needed.

GEORGIA PROMOTER OPTIMISTIC

SOUTHERN YELLOW PINE TAKES AIM ON NATIONWIDE SHINGLE MARKET

A new developing market for Southern yellow pine shingles could create financial benefits for the forestry industry and Georgia's economy. Research and marketing activities indicate that pressure treated Southern yellow pine shingles could establish a new roofing trend with nationwide potential. The wood shingle roofing market, previously dominated by Western red cedar (and other cedar species), is expected to have a serious new competitor in Southern yellow pine.

Much of the anticipated success of the pine shingle market in Georgia can be attributed to the efforts of Roy Bourne, an Alpharetta based entrepreneur who is a roofing manufacturer's representative operating through his privately owned Bourne & Company. Bourne confines his representation to Felts Forest Products of Hemphill, Texas. He is one of the few commercial promoters of pine shingles in Georgia, although his territory covers everything east of the Mississippi. The past few years have been an uphill struggle promoting pine

Pressure treated Southern yellow pine shingles can be used anywhere red cedar shingles can - and with better results."

shingles, but Bourne can now "see the light at the end of the tunnel."

"It seems," Bourne said, "that the general public is permeated with the misconception that Western red cedar has been the universal roofing since Jamestown was settled in 1607."

In spite of this interpretation, Bourne seems to enjoy the challenge. He is no stranger to challenging situations. A liberal arts graduate of The College of William and Mary in Virginia, he spent 17 years as an investment banker, 10 years in the construction business, and did some commercial fishing. He even managed to live with mosquitos for three years in Point Barrow, Alaska - the northernmost inhabited community in the world, only 100 miles from the North Pole.

For the past six years, Bourne has been a roofing manufacturer's representative. He points out that early Americans used various indigenous species of wood for roofing. The wood was obtained from the area where the building occurred. Species included cypress, oak, Southern yellow pine, and even heart pine. However, as progress took its toll, these species became scarce or so prohibitive under heavy demands of logging and construction. West Coast cedar suppliers seized the opportunity and promoted Western red cedar shingles to capture the hearts, minds and wallets of the American public. Canadian lumber dealers did likewise and began shipping Western red cedar into the U. S.

The result: pine has not been used in the United States to any extent as a roofing material for half a century. So the present generation of architects, builders and homeowners are not familiar with the superior qualities of pine roofing simply because they have not used it. Bourne (and others) believe this is going to change.

"Pressure treated Southern yellow pine shingles can be used anywhere red cedar shingles can - and with better results," Bourne said. "Georgia homeowners are now replacing cedar roofing with pine shingles. They found out, at their own expense, that Western red cedar will not hold up. The average lifespan of the best quality Western red cedar roof is only eight to ten years."

Bourne's selling point is a valid one. Traditionally, Western red cedar has not been preservative-treated. This can be a problem, especially in states like Georgia where the heat and humidity can rot untreated wood with a vengeance. However, Bourne emphasizes the durability

of untreated Southern yellow shingles by pointing out numerous cases where pine roofing has lasted more than 50 years.

"So it's hardly farfetched to assume that pressure treated Southern yellow pine shingles will last in excess of 50 years," Bourne said. "The company I represent gives a 30 year warranty with their shingles; I consider this conservative. It stands to reason that if you can bury a piece of pressure treated Southern yellow pine in the ground and it will last indefinitely, then it will certainly last as long when used as roofing."

Although the pine shingle industry is now in an embryonic stage for Georgia, research has been completed to substantiate Bourne's enthusiasm. Texas Forest Products Laboratory of Lufkin, Texas, has been testing pine shingles for more than ten years. The lab's sophisticated testing methods can duplicate years of use in a short period of time.

During the past three years, the Georgia Forestry Commission has also been engaged in a sort of informal, but practical testing. Many Commission units throughout the state, as well as buildings at the agency's state headquarters in Macon, have been roofed with pine shingles. The commission's research depart-



ROY BOURNE

ment wanted to be sure of shingle quality and according to research department reports, there have been no disappointments.

When technical research and practical applications are combined, the advantages of Southern yellow pine over Western red cedar are obvious. The shingles are thicker and heavier, but cost less. From an aesthetic perspective, pine shingling is applicable to all architectural styles, with the possible exception of some European styles. Homeowners are also discovering the attractive design that pine shingles offer for siding. The shingles can be stained with transparent or opaque finishes, and they weather beautifully with age.

Then there are the advantages for the builder. Pine Georgia Forestry/Winter 1989/7



Historic Mable House in Mableton, originally roofed with pine shakes when it was constructed of heart pine in 1843, was recently reroofed with Southern yellow pine shingles to enhance authenticity. The antebellum home, named after Robert Mable, serves as a Cobb County Center for the arts, business groups and civic program. A thousand-seat amphitheater is scheduled to be constructed behind the house.

shingles are easy to work with and minimize problems of keeping construction on schedule. The shingles can be applied directly over decking or lathing, which simplifies the application process.

From a state perspective, establishment of pine shingle markets could have considerable benefits for Georgia. The shingles could be processed in Georgia from local timber supplies. Employment opportunities would increase with demand. Cost efficiency would also be improved, since shingles for the Southeastern U. S. would no longer have to be transported from the Pacific Northwest and Canada.

Quality control is also a vital consideration. Agencies are now available to insure pine shingle product standards in relation to chemical treatment and wood quality (with minimum standard qualifications). This enables architects to use the product with confidence.

As product acceptance increases, so will competition. Bourne realizes that it is possible to promote himself out of business in such a situation, but he is not worried about it for a number of reasons.

"My goal has always been to have the company I represent establish a satellite plant in Georgia - where the Southern yellow pine supply is plentiful," Bourne said. "I believe that will be a reality within a year. I also believe that the quality standards of this operation will require competitors to treat this product with the respect it deserves, or they will not be able to survive in the pine shingle market."

Bourne said one of the most encouraging factors he has noticed is the large number of inquiries he receives from Oregon concerning Southern yellow pine shingles. Oregon is a major U. S. supplier of Western red cedar.

This 1902 photo of a South Georgia house shows how previous generations used indigenous wood species for roofing. These shingles (or shakes) are probably all Southern yellow pine cut from nearby forest land. This particular house, apparently the site of a family reunion, also indicates an unusual enthusiasm for the use of pine shingles, since the entire house is covered with them. (Georgia Archives photo.)



Pine trees, commonly associated with lumber and paper making, have entered the health food market with research indicating some species may offer a vital link in providing man with a 120-year lifespan. An extract of the bark is now being sold as an antioxidant.

Animals in a natural/healthy habitat can live six to eight times their maturity age. Many researchers believe human beings fail to live a full lifespan for reasons ranging from abnormal stress to improper nutrition. A primary cause for this premature demise is an excess of what is defined as "free radicals" in the human body.

A free radical is a molecular structure containing unpaired electrons (normally there is a pair). Each free radical can destroy an enzyme, protein molecule, or a complete cell. If permitted to increase, they multiply by chain reactions into the thousands. Research is associated free radicals with various degenerative conditions ranging from cancer to heart disease to premature aging. Chemical stress, emotional stress, physical trauma and infection all contribute to free radical development.

In essence, today's high tech civilization has created a spawning ground for free radicals. Polluted air, polluted water, radioactive wastes, smoking, drinking, and even jet travel (by exposure to high levels of ozone and radiation) are among the maze of free radical promoters.

THE GOOD NEWS

But with the bad news, there is good news. Free radicals can be destroyed and research indicates that the pine bark may play an important role by supplying a powerful antioxidant.

Antioxidants destroy free radicals. Standby free radicals scavengers include vitamin C, vitamin E, selenium and beta carotene (all sold in health food stores). Now, however, a pine bark extract is on the market that is claimed to be 50 times more effective as an antioxidant than vitamin E, and 20 times more effective than vitamin C. The pine bark product is being sold in health food stores under the trade name of *Phogenol*.

The substance is an extract of the pine species (*Pinus pinaster*). Proanthocyanidin is the active compound in proanthocyanidin that possesses free radi-



CAN EXTRACT OF PINE BARK LENGTHEN HUMAN LIFE?

By Bill Edwards

cal scavenging effects. A U. S. patent (no. 4, 698,369) has been granted to Dr. Jack Masquelier, of the University of Bordeaux (France), who recognized the therapeutic influences of the substance. Specifically, it is the 85% proanthocyanidin content of the pine bark that provides powerful antioxidant capabilities.

Although the substance is now apparently being extracted only from the (*Pinus pinaster*) species in Europe, proanthocyanidin also occurs in Southern yellow pine. According to the text "Organic Chemicals from Biomass" (editor: Dr. Irving S. Goldstein/Professor of Wood and Paper Science/Department of Wood and Paper Science/North Carolina State University), "Although the procyanidins in fruits, leaves, etc. of a number of trees and plants have been surveyed, there have been few investigations of the procyanidins in the barks of commercially grown important tree species other than Roux's work on the (*Acacia*) species. Porter and later Yazaki and Hillis found procyanidin B-1, B-3, B-6, and C-2 in the inner bark of *Pinus radiata*. The dominant proanthocyanidin in (*P. taeda*) (loblolly pine) is procyanidin B-1."

SOUTHERN PINE SIMILAR

Dr. Julian R. Beckworth, III, (Cooperative Extension Service Wood Products Specialist with the University of Georgia/and faculty member of the UGA School of Forest Resources) comments on the text: "Since the Southern pines are similar in so many ways, I'm sure that proanthocyanidin is present in loblolly (*Pinus taeda*), as the article indicates, and is present in most - if not all - of the other Southern yellow pine species."

Dr. Beckwith's observation leads to a question: If Pycnogenol evolves into a successful product and proanthocyanidin occurs in loblolly and other Southern yellow pine species - might Georgia's Southern yellow pines become a future source of this substance?

Already widely used in European countries as an antioxidant, the substance is relatively new on the U. S. market. Use of pine bark for therapeutic purposes goes back several centuries - and possibly into unrecorded history. In 1534, French explorer Jacques Cartier was trapped by ice in the Gulf of St. Lawrence. Cartier and his

ship's crew were forced to live on biscuits and salted meat for a prolonged period. Scurvy set in and 25 of the 100 man crew died; at least 50 more were critically ill. Fortunately, the crew encountered an Indian who provided a pine bark tea and poultices made of the same substance. The treatment worked with incredible effectiveness and the remainder of the crew

recovered.

Approximately 400 years later researchers from the University of Bordeaux found that pine bark used by Cartier and his crew contained not expected vitamin C, and the pine needles contained very little vitamin C. Eventually, it was discovered that the bark contained a water-soluble antioxidant substance now available in Pycnogenol.

WAIT-AND-SEE ATTITUDE

Despite impressive research and optimistic claims, a random sampling of Atlanta health food store owners revealed a general wait-and-see attitude. They prefer to wait for definite customer response and more validation from research. However, there is some agreement among health food experts that Pycnogenol could be a major breakthrough. It was also pointed out by health food store persons that several pine species are used in the manufacture of medicine, and so-called "pine nuts" (seeds from *Pinus pinea*/Pinus edulis) have been sold in health food stores for many years.

Pinus pinaster, the species from which Pycnogenol is extracted, is commonly known as maritime pine. Although usually not considered a decorative tree, the species is useful in a number of ways. The *pinaster* habitat is the seashore. *Pinaster* populates the largest man-made forest on earth; a forest developed on the shifting sands of Southwest France during the last century.

In 1789, M. Bremonnier planted more than 12,000 acres of sand dunes with *pinaster* and broom seed. Following his experiment, three million acres were added to the cultivation. Third and fourth generations of these pines are still being tapped for turpentine. However, the recent extraction of Pycnogenol from this species may prove to be an even more valuable natural resource.

This new role of the pine tree creates questions: Will Pycnogenol prove to be a major breakthrough in the health field? Are there other pine substances that might provide health promoting products or even miracle cures? Will Georgia's vast stands of Southern yellow pine become a source of Pycnogenol and other health promoting substances? And, if so - what would this mean to Georgia's economy?

Will Georgia's vast stands of Southern yellow pine become a pycnogenol source...if so, what would it mean to the economy?



POPULATION PREDICTIONS IMPORTANT IN CONTROL OF PINE BEETLE MENACE

There are no easy solutions to Georgia's Southern Pine Beetle dilemma, but the Commission is "optimistically pursuing several avenues of prediction and prevention techniques that may be effective in battling the destructive insect," said Entomologist Jerry Price.

Predicting population trends is always tricky business and oftentimes difficult to incriminate, according to the Commission entomologist, but early warnings do help landowners prepare for the inevitable. For instance, the 1979 epidemic in Georgia was predicted as early as January of 1979 and major publicity efforts were employed by the GFC as well as by private organizations.

Although accurate figures are not available, it was evident that timber tracts were being offered for sale before the spring explosion of beetles and as a result, a lot of crowded over-mature stands were eliminated prior to the beetle surge.

Susceptibility of stands can be determined, Price said, and research has identified those factors that make stands more beetle prone; these are tree age, overcrowding and species composition and all of these factors can be determined by a professional forester or entomologist. If a stand has been identified as highly susceptible, it should be scheduled for removal regardless of the current status of the stand. There is no room for sentimentality. Landowners should make economic decisions based on sound professional advice.

Too often, timber growers will refuse to cut biologically and economically mature stands due to stumpage prices as they want to wait until prices increase. If the stand in question is 45 years or older, it has already withstood wind, lightning (fire), hail, ice and

beetles at least once along the way and delaying one or two years could result in a complete loss of the stand," Price said.

The entomologist explained that the Commission is now deploying



Pheromone traps are used to help determine beetle population trends.

pheromone traps in selected counties to determine beetle population trends prior to outbreaks; the pheromone frontalinalin is a chemical substance released by the female SPB to attract males and other females. The beetles collect the airborne molecules of pheromone from the environment with their highly specialized antennae; the molecules trigger a behavior response in the beetles. The pheromone is used in funnel traps to collect beetles from their natural habitat.

Traps are emptied at designated intervals and the beetles are sent to the Commission Headquarters in Macon to be identified and counted. The ratio of SPB to predator beetle (checkered beetles) helps determine the population trend of SPBs in an area. The traps are deployed in March and remain in place for four weeks.

Pheromone traps, in conjunction with aerial surveys conducted by the Commission, are just two ways by which predictions can be made. Current research underway at the University of Georgia is looking at the genetic structure of individual beetles which might eventually offer insight into beetle behavior. Further research in the fields of microbiology and virology may reveal diseases that are capable of causing beetle population crashes.

"All of these factors combined are possibilities for a more integrated approach at predicting and controlling SPB populations," Price said, "and the Commission wants to be in the middle of any new and exciting technology that offers additional insight into understanding the beetle."

A major stumbling block is the lack of research funds at the federal level and current funding levels are inadequate for such a severe problem which requires long term basic research, according to Price.



BEETLE UPDATE



Donnie Price was herding an 18-wheeler up and down the East Coast back in 1973 and he thought he had truck driving in his blood to the extent he would never give up life on the open road. His attitude, however, changed abruptly one day when he came upon a forest fire and observed patrolmen subduing the blaze. "That's the day I decided firefighting would be more exciting than driving a big rig up and down the highway," said Price, "and I began looking for a way to change jobs." Fortunately, the Commission's Emanuel County Forestry Unit had a vacancy and the truck driver lost no time in filling out an employment application.

"I also had another reason for getting off the road," Price said, "I was only at home on weekends and it was Sunday night before my two-year-old son began to call me 'Daddy.'"

Today, Price is ranger of the Emanuel County Forestry Unit, one of the largest in the Commission. He supervises five patrolmen and a tower operator. His unit is responsible for the protection of 339,430 acres of forests and the personnel work closely with 12 Rural Fire Defense Units across the county.

Price, a native of Johnson County, came with the Commission as a patrolman and was named ranger of the Emanuel County Unit following the death of Ranger Leon Ray in 1980. He

is a graduate of Johnson County High School and attended Swainsboro Tech. The ranger and his wife, Gail, and children Joel and Christy, live in rural Emanuel County.

The spacious headquarters building of the Emanuel County Unit and the site were donated to the Commission

by the county and Price said "all we had to do was add on the front porch...the county did all the other construction."

The ranger said he experienced "only one really tight spot" during his 15-year tenure with the unit. "I became trapped on a 300-acre fire

EMANUEL COUNTY FORESTRY UNIT



Top photo: Front view of unit headquarters. At right: Ranger Donnie Price and Tower Operator Shirley Radford, who works in the office when not on tower duty, check records.

While worrying about a new patrolman who was plowing behind me and had to douse an old shirt with a can of water I happened to have on my tractor and then dive under the tractor while the fire roared over it." He said he came out of it with a "burned face and singed ears."

PATROLMAN LARRY WOMACK

Patrolman Larry Womack is another former truck driver assigned to the unit, but his vehicle was a bakery truck and he grew tired of delivering bread and donuts to retail markets in the Swainsboro area after it became somewhat of a seven-day-a-week job.

The patrolman, a native of Jenkins County and a graduate of Emanuel County Institute, studied mechanics at a local technical school and operated and maintained heavy equipment while serving eight years in a National Guard engineering battalion. Ranger Price said Womack "had no trouble adjusting to our equipment when he came with us in 1981."

Patrolman Womack and his wife, Linda, and their children, Jody, Ryan and Brett, live on a farm near Swainsboro and attend Mt. Olive Baptist Church. He is fire chief of the Canoochee Volunteer Fire Department and was recently presented an award of appreciation by Commission Director John Mixon for heading a department sponsored drive that provided funds for a young cancer patient to visit Disneyworld.

PATROLMAN SAM WILLIAMS

Patrolman Sam Williams, who grew up on a Jenkins County farm, said he was looking for interesting employment with



Forest Patrolmen Larry Womack, left, and Sam Williams weld a section of metal to be used in the construction of a fire truck tank. The modern shop at the unit builds tanks for the Rural Fire Defense program, a project that provides equipment for volunteer fire departments mainly in Georgia's rural areas.

good job security when he applied for work with the Commission. He was

ANOTHER IN A SERIES OF STORIES ON OUTSTANDING COUNTY FORESTRY UNITS

hired by the Emanuel County Unit in the fall of 1987 and he said he found his experience with machinery back on the

farm helped him "feel at home" with the heavy equipment he now operates.

After graduation from Jenkins County High School, Williams joined the Marine Corp and served some time in Vietnam. He returned home and attended East Georgia College for two years.

The patrolman said he hasn't had a "close call" since he came with the unit, although he did have the unpleasant

"I not only consider the Emanuel County Forestry Unit the most outstanding in my district, but one of the most efficient in the entire state. The personnel work well with landowners and others in all phases of our forestry programs and the county reforestation committee is the most active in the Tenth District.

"The Emanuel ranger and crew keep equipment, buildings and grounds in excellent condition and willingly accept additional responsibilities when called upon."

*Jerry R. Lanier
District Forester*

experience of bogging his tractor in a swamp during a big fire on the Emanuel-Johnson County line.

Patrolman Williams and his wife, Winnie, and children, Patricia, Sam, Jr., Robert and Timothy, attend Johnson Chapel Baptist Church.



PATROLMAN KENNETH BRINSON

Patrolman Kenneth Brinson would rather fight fire than farm. He grew up on a farm and remembers the many times he plowed his father's fields with mules. Now he plows firebreaks with a powerful crawler tractor and enjoys his work.

There was no vacancy in the unit crew when Brinson applied for a patrolman position in 1968 and he had to serve for more than two years as a tower operator at Oak Park while awaiting an opening. Brinson said most of his experience out on the fire line has been uneventful, but he does recall one bad incident. "It was a big 400 to 500 acre fire on a dry and windy day and I got my tractor hung up on a stump. I raked around the tractor as the fire approached, but there was too much fuel around and I had to abandon the equipment," he related.

Patrolman Brinson, who was born in Treutlen County but has spent most of his life in Emanuel County, lives with his wife, Doris, and son, Lee Allen, near Swainsboro. They attend Holton Chapel Church.

PATROLMAN BILLY McDANIEL

Patrolman Billy McDaniel was confined to inside work during 15 years of employment at a Swainsboro night club before he finally decided to seek a job in the great outdoors. He said his big break came in 1974 when a vacancy occurred in the local county forestry unit.

McDaniel, who attended Swainsboro High School and served four years in the Air Force, said he enjoys operating and working on heavy equipment and his involvement in the many other duties of the unit. He said his only accident came when he was plowing a pre-suppression firebreak across a field of grass adjacent to a forest tract. "It looked like a level field," he said, "but all of a sudden my tractor hit a deep wash and tilted and broke my leg." He said his tractor radio was knocked out of commission and "I had to hobble for a half mile or more to get to a radio in a pickup truck and call for help." His leg was in a cast for 11 weeks.

The patrolman and his wife, Laverne, own a small farm and they attend the Baptist Church. Their four married children - Brenda, Debra, Steven and Calvin - live in the area and family reunions are frequent occurrences.



PATROLMAN SAMMY MILLS, JR.

Patrolman Sammy Mills Jr. wanted to represent the Georgia Forestry Commission in his home county, but he had to take a circuitous route to get there. While working as a diesel mechanic for a tractor company, he began to notice the heavy equipment used by the Commission and decided that he would enjoy working with crawler tractors in the field rather than being confined to shop work.

Mills came with the Commission in 1982 when an opening occurred in the Effingham County Unit. He later transferred to the Toombs County Unit and on a third move he was in his home county of Emanuel.

The patrolman, who lives with his wife, Deborah, and sons, Sammy II and Adam, in Adrian, said it has been relatively smooth sailing since coming with the Commission, but he does remember one harrowing experience. "We were on a big fire and the tractor's ordinary use was in the shop and wasn't familiar with the equipment was operating," he explained. "There was a sudden wind change and the area was filled with very thick, white suffocating smoke created by burning pine straw and berry bushes and that when I got my tractor hung up between some pines." After raking around the tractor, he had to abandon it to save his life.

Mills was treated for smoke inhalation and the burned plow tires and hydraulic lines were replaced and the equipment was soon back in service.

Patrolmen Mills and Womack have fought the big fires in Idaho and Mc

na and Mills said he considers it "a great learning experience." He said we found out that the Georgia Forestry Commission doesn't have to take a back seat to any other state when it comes to firefighter training, equipment and communications...we have the best."

TOWER OPERATOR SHIRLEY RADFORD

Shirley Radford feels comfortable in the cab of her tower that overlooks the vast forests of Emanuel County and she is not even disturbed when the tower sways with a strong wind, but there is an element of the weather that bugs her; Lightning.

She said she remembers one beautiful, clear day when "a black cloud came out of the blue and just seemed to be suspended over the tower." She said lightning was flashing all around the tower cab and that was one of the worst times her job has been frightening. When the tower operator, who attended public school in Wadley and had secretarial courses at Swainsboro High, is not on duty in the tower, she is in the unit office assisting the ranger in record keeping and other chores.

She once taught pre-school children in Dublin, but she said she would rather visit the Swainsboro area schools with the ranger and other unit personnel to conduct fire safety programs and promote forestry. Ranger Peale said "she is very good with children and we are fortunate in having her involved in our school programs."

Tower Operator Radford and her husband, Charles, have two sons, Ben and Tim. The family attends Sardis Baptist Church.



Byron wood carver specializes in songbirds.

HARD TO REALIZE THEY AREN'T REAL!

When it comes to woodworking, Jim Peale is a true craftsman. He uses only Georgia woods, mainly from Peach and Houston counties, to make a wide range of items, including furniture for his home, clocks, and carvings of animals such as deer, dogs, raccoons, ducks, and songbirds.

Songbirds are Peale's specialty, with such attention to detail that it's hard to realize they aren't real. Peale first carves the wood to the right size, usually lifesized, and then uses a wood-burning iron or etcher to shape the detail of the feathers and other features. The next step is painting the bird. For authenticity, he uses calendars, photographs, and "bird watching" books to be sure his efforts are truly lifelike. In addition, he builds bird feeders for color observations and to pose his creations.

Peale said it takes him about 30 hours to complete a songbird, with the cardinal being the most difficult to paint because of its six shades of red and hints of gray and green with an orange beak.

His clocks are usually made in the shape of the state of Georgia. The woods he uses include pine, walnut, cherry, persimmon, and red cedar.

Peale saws his own wood with a band saw and then lets it age, air dried under cover, for approximately two years before using it. "I try to finish all my wood naturally, using only clear pine oil or natural stain," he said.

An engineer at Warner Robins Air Force Base, he said he started woodworking in 1981. "I needed an inexpensive hobby. Woodworking is just that, and it's very enjoyable."

Peale gives away most of his carvings as gifts to friends. He does, however, keep his favorites to display in his rustic log cabin home in Byron.

"He has saved a lot of property and we will never know how many lives."

LONG, ILLUSTRIOUS CAREER ENDS FOR COMMISSION'S FIRST PILOT

By Howard Bennett

The first pilot ever to fly for the Georgia Forestry Commission landed his Cessna Skylane at the Waycross Airport on a recent November afternoon and quietly walked away from a career that spanned 42 years of aviation history.

It was suddenly over for Thurman (Mac) McDonald, who had learned aeronautics at a little flying school in his hometown of Alma and became a pioneer in the detection of South Georgia forest fires by aerial observation. All the countless hours he had soared across the skies to check smokes and direct ground crews in battling fires came to an abrupt end as he made his final approach; the moment was not without emotion.

"Joey Hall asked to be with me in the cockpit when I made my last flight," McDonald said, "and I was glad to have him." Forester Hall heads the Commission's Waycross District and was the pilot's immediate supervisor. Others also reacted sentimentally as the veteran flier bowed out. "I'm going to miss that familiar voice that I've heard coming over the radio during the 15 years I've been here," said Patrolman Warren Yawn of the Jeff Davis County Unit. "He has saved a lot of property and we will never know how many lives."

HOOKED ON FLYING

McDonald had been out of the Army for a few months when he and a companion stopped by the newly established flying school one day in 1947. "Just out of curiosity we wanted to see what was going on," McDonald said. The instructor gave the two young men a "demonstration flight" in a Piper Cub and McDonald, who had never flown before, was thoroughly hooked. After six hours of training under the GI Bill, a federal educational funding program for armed services veterans, he made his solo flight. He said he remembers it was a "beautiful landing" and a time of high exhilaration.

There were 86 students who learned to fly under Instructor H. A. Strutz and others at the Bacon County School that flourished for a few post war years and then

closed, but McDonald was the only one to obtain a commercial license. "In those days a commercial license cost \$1,800," he said, "but today, it would run about \$14,000." He could have gone on and qualified for an airline transport rating, but he was intrigued with the little J-3 Piper the school used for training and he decided to stick with light planes.

EXPERIENCE ON GROUND

McDonald's career in forest fire detection goes back to 1950 when he worked under contract with the old Timber Protection Organization. The late Troy Spell, Clinch County Ranger, was his supervisor and an arrangement was made for the pilot to fly six months of the year and spend the remaining six months with Union Camp Corporation, where he operated a bulldozer, fought forest fires and attended to other routine duties. "That was some of the best training I ever had," said McDonald of his summer work. "It gave me an opportunity to learn first hand what really went on down there on the ground and I remembered it when I was spotting and directing crews from the plane."

McDonald was using his own plane during the early years. "It was a little Piper Super Cruiser that I was lucky enough to buy for \$1,350. It had been flown only 210 hours," he said. "It was a fine plane and it was just like new."

The late Guyton DeLoach, who was director of the Commission, and Ed Ruark, who was chief of Forest Protection, came to South Georgia in the early fifties to discuss the fledgling aerial operations with McDonald and settled on buying a Cessna 170. It was a time when they hired the late Hank Slentz as a pilot and later began expanding the air arm statewide.

Patrolman Yawn is right in his assumption that lives were saved through McDonald's vigilance and devotion to duty. He tells of shifting winds on a big fire in his county three years ago that could have cost the lives of three tractor drivers if the alert pilot had not radioed escape instruc-



ons. Similar reports have come from other units, but personnel in the Ninth District will always remember one of its heroic deeds in particular. The pilot was cruising over a 1-acre fire near St. George one day in 1961 when he spotted trouble. Patrolman Vess Yeoman was plowing a break when the wind suddenly shifted. "That's when I realized that nobody else could get to him and I had to make an emergency landing and do what I could," McDonald said. After landing and dragging the semi-conscious firefighter, who was seriously burned, to the cockpit, the pilot radioed a landing field at Folkston to have an ambulance standing by. McDonald had no time to consider the danger of landing in a close place during the rescue, but he said he "felt a great sense of relief when it was all over...I could have easily clipped a power line."

SAFER IN THE SKY

The pilot, who contends that "I've always felt as safe, or maybe even safer, up there in my plane than I do when I'm on the ground driving my pickup truck," has had few emergency calls during his career and said alertness is the key to keeping problems to a minimum. He quotes the old aviator axiom: "There are old pilots and there are bold pilots, but there are no old, bold pilots."

McDonald does recall one Saturday afternoon when

conditions became a little harrowing. He took off from Homerville to spot fire in a swamp, but a line of thunder showers moved in and visibility became extremely poor. Unable to land at Waycross and at any other airport within range, he was forced to land on a narrow forest trail and spent the night protecting his aircraft from high winds and roaming animals.

He said he had to pull the plane into a ditch and sat on the tail to keep the wind from wrecking it. This was before open range was outlawed in Georgia and livestock roamed at will. McDonald, who lives on a 60-acre farm near Alma and raises beef cattle, said "cows like to come up and lick the fabric wings of a plane because of the dope that is applied to the cloth...they would rather lick that than a salt block."

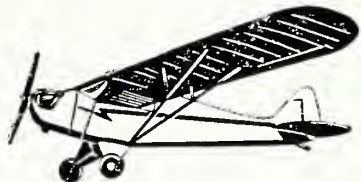
Although McDonald learned to fly at a time when aviation was approaching the jet age, he has never regretted his decision to stick to small aircraft and often surprises friends when he tells them that he has "never even ridden in an airliner or a large plane of any kind to this day." He has, however, had to contend with military aircraft darting across the sky at supersonic speeds, but he knows the restricted areas and the flight patterns and gives a wide berth to the jets.

When the pilot and his wife, Verlene, were wed it

was agreed that he would not engage in one particular type of flying. "It was in our marriage vows," McDonald said, "that I would never do any crop dusting. In that kind of flying all you have to do to be killed is to become a little fatigued and make just one little slip." He told of close friends who had been killed while doing low altitude crop dusting and said there is "no comparison between that kind of flying and flying to spot forest fires." The pilot, who has served as a deacon in Baptist Church since 1955, said "I believe the Lord looks after you up there, but you have to realize your limitations."

Although the Commission now has planes flying patrol across the state, with a pilot stationed in each of the 12 districts maintaining an enviable safety record, there have been three fatalities since the air operations began. The one McDonald remembers most vividly and painfully was the 1981 death of Pilot Ben Watkins who crashed about five miles from Statesboro while returning from a fire. "I had talked to Ben on the radio that Sunday afternoon just ten minutes before he was killed," said McDonald.

Spotting fires and directing ground crews has always been the main functions of the pilots, but McDonald remembers when they worked with another state or-



ganization: "Before the State Patrol got planes of its own, Mr. DeLoach had us flying on holiday weekends with a state patrolman in the cockpit with us. We would follow highway routes and the officer would radio his ground units when reckless drivers were spotted."

Radio equipment during McDonald's early years as a flier was crude compared to the sophisticated communications systems of today, but he said the late Henry Cannon "was our engineer and a true genius who built our radios and they served us well. I remember when we got up to nine channels and we thought we were something." Today's Commission planes have 720-channel radios.

Air strips have changed, too. "When I started, we had a lot of grass strips and we still do, but we now have a network of modern airports and a pilot flying in Georgia is never more than 25 miles from an airport," McDonald explained.

Commission personnel, other friends and relatives gathered on a recent Saturday night at the Bacon County Recreation Center - just a short distance from where the flying school once stood - to bid farewell to "Mac". In retirement, he plans to spend more time visiting with his children - Jerry, LaGay and Danny - and their families. He said his wife will join him in doing some extensive traveling around the nation "but we will be on the ground...in my truck."

Will he miss flying? "Yes, I certainly will," he said. "Flying is all I've known and it will take some time for me to adjust." The Commission also has an adjustment to make now that the veteran flier has served his time.





Finished blank plaques are stacked high in the Ellijay plant awaiting shipment to dealers where they will be assembled with name plates, medals, etc.

FAMILY BUSINESS STARTED IN A BACKYARD SHED NOW ENJOYING INTERNATIONAL SALES

By Clifton Plumley

"We stayed up all night to finish our first order of one thousand plaques," Teresa Davis said, recalling the humble beginning of her family's business that today maintains manufacturing facilities and warehouses in four states and enjoys international sales.

"I've done a little bit of everything in this business," Davis, vice president of material management of Blueridge Mountain Woodcrafts, Inc., said from her office overlooking the North Georgia Mountains. She said her father, Fred Stahl, started the business in 1974 from a small shed beside their home in Ellijay.

"We made cabinets at first, but had to move on to something else when people stopped building as many houses," Davis said.

The "something else" was wooden plaques and trophy bases. She remembers cutting, sanding, and staining the plaques and trophy bases by hand in her father's make-shift shop in Gilmer County.

The business has come a long way since those days, but it is still family owned. Stahl oversees the company while his son, Tony, is plant manager at the Ellijay site, and daughter, Teresa, works with the import and export division of the business.

Davis, who has worked in the trophy

business for 15 years, has moved up the ranks. She started her career in her father's small backyard shop, became manager when the first plant opened, and now coordinates sales and purchases with Greece, England, Germany, Australia, and the many other countries that purchase BMW's products.

Warehouses in Georgia, Missouri, and Texas, as well as manufacturing plants in Ellijay and Decatur, Indiana, are all managed from spacious and modern offices at BMW's headquarters located on a beautiful Blue Ridge mountaintop in Ellijay.

BMW employs 60 people in Georgia, and although advances in automation have simplified the manufacturing

process, much of the work is still done by hand.

A computerized table saw which stores cutting instructions and provides exact precision in sawing raw wood, and a new exhaust system which vacuums sawdust out of the plant and into receptacles outside, are two of the advances the company has recently made.

BMW uses over one million board feet of wood each year. Plaques and bases are either made from solid walnut or hardwood fiberboard -- both from the forests of the southeast.

Since the wood is cut into pieces as small as 2 x 3 inches, there is very little waste. What little scrap wood that is accumulated finds its way into the boiler which heats the plant.

BMW is not alone in the plaque and trophy industry. There are five or six U.S. competitors and a few foreign ones, according to Davis, but BMW sells only to certified trophy dealerships. "We don't want to sell retail because it would put us in competition with our customers," she said.

In order to stay abreast of the competition, BMW provides an extensive and varied product line and will even do custom jobs for some customers. "We are very proud of our ability to work with customers on special de-

WOOD USING INDUSTRY HAS GONE FROM HUMBLE BEGINNING IN ELLIJAY TO OPERATIONS IN FOUR STATES.



A computerized table saw that stores cutting instructions assures clean and uniform sawing of wood product.

signs," Davis said.

Although the company brings out new items each year, it is "always open for suggestions from customers for new design concepts," Davis said.

One such place to display innovative and new designs is at plaque and trophy trade shows, where standards are often set for the industry, according to Davis.

"We always try to unveil new products and plaque and trophy designs at the shows," Davis said, "and it is a good way to meet potential customers by showing them our high quality products."

BMW makes many other products from wood besides plaques and trophy bases. The company's product line includes music and jewelry boxes, clocks, desk sets, and even a cigar humidifier. Most of the parts used in the products are manufactured in the U.S., with the exception of the marble used on the trophies, which is imported from Italy.

"We would like to buy the marble from Georgia, but there are no facilities here that are able to cut the marble into the sizes and shapes we need,"

Davis explained.

The wood, whether walnut or fiberboard, is brought into the plant in a raw state. Using the computerized table saw, the wood is cut into the sizes and shapes needed to make the various plaques and trophy bases. The wood shapes are then sanded, the edges bevelled, and keyholes cut. A process of staining and lacquering is then performed before the product is ready to be assembled and shipped. Each step is expertly and precisely executed to insure a finished product that will look professional and have a perfect fit.

"Although we are very competitive in our prices," Davis said, "it is our high quality products that keep us in business."

The constantly ringing phones in the company's Ellijay offices, and a fax machine continuously printing orders, as well as the busy plants and distribution warehouses, are in sharp contrast to the days when Teresa Davis filled orders by hand from her father's small backyard shop.

"It's definitely been a challenge," Davis said, "but the progress we have made has made it well worthwhile."



DISTRICT FORESTER DIES UNEXPECTEDLY

Commission employees across the state, forest landowners and others who knew him were shocked and saddened recently by the untimely death of Athens District Forester Don Griner.

Commission Director John Mixon said "Don's sudden death has left a void in our organization, an emptiness that will be difficult to overcome. He was an enthusiastic leader who was dedicated to his profession and although eligible for retirement, he often said he wanted to continue with the Commission because he thoroughly loved his work and his association with fellow employees."

Richard Donald Griner, a native of Camilla and a graduate of the School of Forest Resources, University of Georgia, came with the Commission in 1958 as an assistant ranger and was named assistant district forester in Rome the following year. He became Camilla District area forester in 1968 and transferred to Washington as district forester in 1972. He transferred to Athens in 1986.

He served in the U. S. Marine Corps from 1951 to 1953 and excelled in several sports while in high school and college. He was a member of the Baptist Church, where he had taught Sunday School and worked closely with church youth organizations. He was a member of the Society of American Foresters and the Georgia Forestry Association.

The Commission extends heartfelt sympathy to his wife, Polly, and sons, Richard and Don.





Wildlife students Jeffery Brooks and Jeff Witt at field study site.

STUDIES INDICATE WILDLIFE NOT HARMED BY HERBICIDES

By Karl V. Miller

School of Forest Resources
University of Georgia

Control of competing vegetation is one of the most important steps in achieving successful forest regeneration in the South. Every year more and more sites are treated with herbicides for site preparation and for pine release. Herbicides can be used cost effectively to ensure stand regeneration and rapid early growth. In addition, herbicide use can minimize soil erosion that is often a problem associated with mechanical means of site preparation. Although it is known that most herbicides have very low toxicities to wildlife, relatively little is known about their indirect effects on wildlife.

The structure and composition of vegetation is a primary factor influencing the distribution and abundance of wildlife. Since the primary purpose of herbicides is to kill vegetation, doesn't it make sense that herbicide use would adversely affect wildlife? The answer is a resounding NO. Research at The University of Georgia, and at other universities (most notably Mississippi State) has indicated quite the opposite. Over the past couple of years there

have been studies on how different herbicides affect the vegetation on newly planted pine stands. This research has been funded in part by the Georgia Forestry Commission, the U.S. Forest Service, and the University's School of Forest Resources. Past studies have shown that on the year after treatment, herbicide use can actually increase the amount of valuable wildlife food plants over that which would be found on mechanically prepared areas.

Different types of plants have a high degree of tolerance to the different types of herbicides used. For example, hexazinone (Trade Name=Velpar or Pronone), actually appears to promote the establishment of legumes, most of which are very valuable food sources for deer, turkey, quail, and a number of songbirds. On the other hand, picloram (Trade Name=Tordon) encourages grasses to become the dominant vegetation on an area. These grassy areas then provide home sites for mice and other rodents, which in turn are preyed on by numerous predators.

Most chemical site preparation is aimed at controlling hardwood sprouts that will compete with the

planted pine trees. Many people are dismayed that several important hardwood species of trees (oaks, cherries, etc.) are eliminated. However, they must realize that these hardwoods would never reach a size or age where they would produce mass such as acorns and hickory nuts.

In addition, hardwood brush is very competitive with more desirable wildlife plants. By controlling hardwood sprouting a forest owner will promote many species of herbs, weeds, and vines that actually are the key wildlife plants. These understory plants provide abundant forage for deer and rabbits. They also produce an abundant supply of seeds for quail, turkey, and other songbirds.

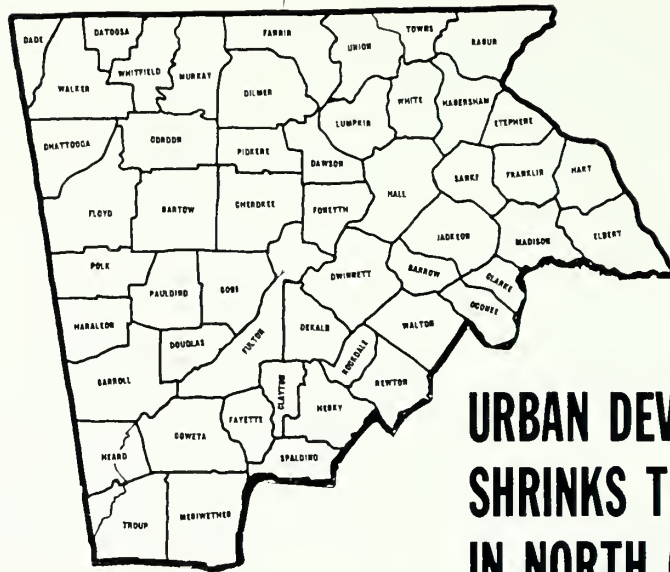
Herbicide application to clearcut areas often results in an abundance of dead standing trees. While these areas often appear unsightly and devoid of life to the human eye, these dead trees are extremely important to cavity nesting birds. Woodpeckers, bluebirds, chickadees, and a number of other species will make these areas home. In fact, several of these bird species would not even be found in an area if it wasn't for standing dead trees. →

Several studies have shown that the number of different kinds of birds is higher on these chemically treated areas than on mechanically treated areas. Numbers were even higher than could be found in mature forests. So the next time you see a chemically-treated area with all those 'ugly' dead trees, think of it as an apartment complex for birds.

Two studies are in progress that are designed to look at the effects of herbicide site preparation on wildlife food availability. Because different herbicides result in different plant communities the best one to use must first be determined. These studies are being conducted by two wildlife students at the School of Forest Resources as part of their Master of Science degree research program. Jeffery Witt is finishing a study that he has been conducting for the last year in the Georgia Piedmont. His study sites included an area on the Bishop F. Grant Memorial Forest in Putnam County and another near Forsyth in Monroe County. Four different chemical treatments and two types of mechanical treatments were compared. Jeff is now compiling his tremendous amount of data. Hopefully, a report on his results will appear in a future edition of Georgia Forestry.

The second student, Jeffrey Brooks is currently evaluating potential sites in the Coastal Plain of Georgia. Jeff is scheduled to begin his field data collection early next year. In addition to looking at wildlife forage in response to chemical site preparation, Jeff hopes to be able to evaluate populations of some wildlife species on these areas. He certainly will have his hands full when he begins his data collection.

In summary, chemical site preparation is not bad for wildlife as was once believed. In fact, this method appears to be preferred to mechanical site preparation as far as wildlife is concerned. There is still a lot not known about the effects of herbicides; however, studies like those being conducted at the University of Georgia with support of the Georgia Forestry Commission certainly will help expand the present data.



URBAN DEVELOPMENT SHRINKS TIMBERLAND IN NORTH GEORGIA

More than 50,000 acres of timberland have been cleared annually since 1983 for urban development and other related uses in the 53-county northern region of Georgia, according to a new survey of forest resources.

Results of the comprehensive survey—an inventory conducted by the U. S. Forest Service and supported by the Georgia Forestry Commission—were presented at a meeting in Gainesville. The northern section of the state is one of five geographic divisions set up for the statewide survey. Data was earlier reported on the other four areas.

The survey showed that softwood is down by almost 10 percent from 4.9 billion cubic feet to 4.4 billion cubic feet, and it is predicted an additional 20 percent reduction will occur over the next decade. Hardwood inventory has increased 8 percent to 5.9 billion cubic feet in the northern region.

The survey revealed a continuing decline in softwood growth. Since 1983, annual softwood growth has dropped 31 percent from 243 million cubic feet to 167 million cubic feet. Over the same period, softwood removals increased by 24 percent to 239 million cubic feet -- 40 percent more than growth. Hardwood growth declined by about 13 percent, while harvest jumped by almost 50 percent. However, hardwood growth still exceeds removals by 70 percent.

Herbert Knight, forestry consultant who presented the findings, noted an

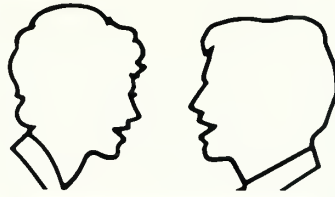
encouraging trend in the rate of pine regeneration in the region. He predicted that the current 40 percent increase in pine regeneration will help stem declining growth over the next 10 to 15 years.

After the meeting, Commission Director John Mixon stressed the importance of forest surveys to the economic health of the State. "Forestry is an \$8.7 billion industry in Georgia and the sixth survey of forest resources is critical, both in understanding trend and in guiding industry expansion. We view the results as both a challenge and an opportunity."

Lamar Beasley of the U. S. Forest Service said "Georgia now has the most complete set of data available on the state's forest resources. It represents state-of-the-art data gathering and analysis, as well as a spirit of cooperation among federal and state agencies and forest industry. As in the past, we will study the report closely to determine whether our research program are in line with current needs."

Detailed information for the region is contained in two publications: Resource Bulletin 108, "Forest Statistics for North Central Georgia, 1989" by Tony G. Johnson; and Resource Bulletin 107, "Forest Statistics for North Georgia, 1989" by Mark Brown. These publications are available from the Southeastern Forest Experiment Station, P. O. Box 268, Asheville, N.C. 28802.

PEOPLE

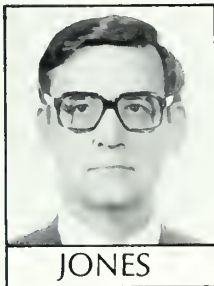


In The News

RAD HALL, a native of Columbus and graduate of Abraham Baldwin Agricultural College with an associate degree in forest technology, has been named ranger of the Talbot County Unit. The new ranger is a licensed forester and worked five years in the landowner assistance program of the Union Camp Corporation. He succeeds Levy Rentz, who transferred to the Brooks County Unit. Ranger Hall is a member of the Methodist Church,



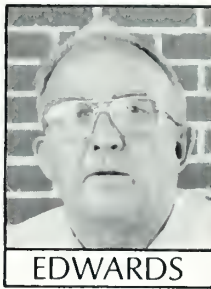
HALL



JONES

the Georgia Forestry Association and Bucks Unlimited...LEROY JONES, Southern Region Deputy Director, U.S. Forest Service, based in Atlanta, will retire in late December. A native of

Clarksville, Jones is a graduate of the University of Georgia and served as director of the Eastern Tree Seed Laboratory in Macon and in other important posts during his 37-year career. He has written more than 30 technical articles on forest silviculture and management...GLENN EDWARDS, who served with the Commission for 32 years, was recently honored with a retirement party at the Stone Mountain unit. Edwards, who retired as a district ranger, was employed by the Commission in 1957 as patrolman for the Gainesville District. He was later promoted to assistant ranger and county ranger. Currently a resident of Dacula, he and his wife, Esther, attend the New Hope United Methodist Church in Lawrenceville. They have three sons and a daughter.



EDWARDS

NATIONAL FOREST FIREWOOD PERMIT FEE IMPOSED

Persons who cut firewood off National Forest Land must now pay a small fee, according to Forest Supervisor Ken Henderson of the U. S. Forest Service.

Although firewood permits in Georgia have traditionally been given free to the public, the U. S. Forest Service this year implemented a nationwide fee system to help cover administrative costs of processing the permits.

Firewood permits are now issued on the Chattahoochee-Oconee National Forests in Georgia for \$5.00 per cord, with a two cord minimum per permit.

"Some National Forests have been charging for firewood for years," Henderson explained, "With the new fee system, all National Forests will

charge for firewood." The potential return to the federal treasury from the nationwide fee system is an estimated \$2.25 million annually.

Demand for fuelwood off National Forest Land increased dramatically during the early 1970's as a result of the oil embargo. Although demand has decreased in recent years, the National Forests still provide an alternative to those who want to cut their own wood. Last year more than 3,566 permits were issued on Georgia's two National Forests for about 18,000 cords of wood.

Permits for cutting firewood are issued by the district ranger. Because some wood might be insect-infested or diseased timber, certain portions of the National Forest are off limits for gathering firewood.

Plant a tree, cool the globe

It's getting pretty hot around here.

Every time you plant a tree, you're helping to solve what may be the greatest environmental problem of our lifetime, global warming. How? Carbon dioxide from energy consumption is trapping the sun's heat in our atmosphere, turning the Earth into a planetary hothouse. Just in the process of growing, trees convert carbon dioxide into life-giving oxygen, letting the Earth "breathe" again. America has room for at least 100 million trees, around homes and offices, schools and shopping malls. Won't you do your part to help cool the globe?

Georgia's coordinator for Global ReLeaf is Sharon Dolliver

Dial 1-800 GA TREES





ANOTHER YEAR!

Time passes swiftly when you're an adult and often there is a sense of regret when you look back over an old year and think of unfulfilled accomplishments. One regret that many Georgia landowners have is that they failed to plant trees on their idle acres last year or year before last - or even ten years ago. Each year of postponement is a season of growth lost forever. **THE FUTURE BELONGS TO THOSE WHO PLANT FOR IT** is a familiar slogan of the Georgia Forestry Commission. Why not make it your slogan in 1990 if you have land that should be growing profitable trees.



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FEATURE PHOTO



This tree is slowly enveloping the grave stone of a Confederate soldier buried about 125 years ago in Myrtle Hill Cemetery in Rome and visitors to the historic site often wonder why a solitary oak is growing in a plot containing several hundred military graves. There is a local theory: Confederates near the end of the war were forced to eat acorns for survival and this particular soldier, with a head stone marked "Unknown," was buried with acorns in his pocket. Forester Grant Evans of the Commission's Rome District said, however, that there probably is more myth than logic in that explanation, as the soldier would have been buried too deeply for the acorn to germinate. Despite his practical explanation, Evans said he appreciates the romantic version that has been retold so many times.

ON THE COVER - Soaring pines against a clear, blue Georgia sky! It's a familiar sight in a state that is blanketed by more than 24 million acres of forests in various stages of growth. This scene of mammoth loblollies in Jones County was captured by Commission Photographer Billy Godfrey.

Georgia

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John Wells, Commission staff forester, operates computerized Forest Industry Bulletin Board he recently designed.

ELECTRONIC BULLETIN BOARD PROMISES SALES

The Georgia Department of Industry and Trade is offering the services of a new computerized Forest Industry Electronic Bulletin Board designed to promote communications within the forest products industry and promote buying and selling.

John Wells, Commission staff forester on loan to the Department of Industry and Trade, developed the system as part of his promotional efforts in marketing and international trade. Wells said the bulletin board's immediate contact advantage offers current market studies and timely sales leads.

"We're in the formative stages only," Wells said. "but the potential is virtually unlimited." He emphasized that more participation is needed to upgrade the system and increase efficiency.

"A lot of people are reluctant to use anything computerized," Wells said, "but this system is very easy to use; if there are any questions, they can call me and I'll put them in the system. There's no charge - everything is free."

According to guidelines, the system

will offer weekly forestry bulletins when operating at desired efficiency level. Bulletins will include information on various forestry subjects such as sawmill operations, industry schedules, particle boards, pine lumber, naval stores, white oak, pine plywood, etc. Diversity of subject matter will increase as the system progresses.

Operating at maximum efficiency, the bulletin board offers immediate contacts for buying and selling - plus instant access to forestry experts and industry leaders who can answer questions quickly. The system can also eliminate many telephone and mail delays. "At this stage we're

... "There's no limit on how big or beneficial this concept could be to forestry. It just depends on response and how many people use the system."

operating on state level," Wells said. "However, there's nothing to prevent us from reaching out on a national - or even international level."

Wells said what the bulletin board could use now is a "caring and efficient home" to maintain current information and upgrade the system during downtime. Wells said this type of situation would enable the bulletin board to evolve into a vital information center for wood technology, marketing, financing, and international forestry trade.

"After all, the need for global marketing strategy is now a growing reality in the business world," Wells said. "Actually there's no limit on how big or beneficial this concept could be to forestry. It just depends on response and how many people use the system."

For further information, Wells urges anyone interested in the bulletin board to call him at 404/656-0632.

Bulletin board sponsors include the Commission, Georgia Department of Industry and Trade, University of Georgia Cooperative Extension Service, and Georgia Power Company.

ROCK MUSICIAN AND TREE FARMER

STRANGE COMBINATION? NOTHING STRANGE ABOUT IT, ACCORDING TO CHUCK LEAVELL, WHO IS EQUALLY AT HOME ON THE STAGE WITH THE ROLLING STONES OR DOWN ON THE GEORGIA FARM TENDING HIS PINE TREES.

By Howard Bennett

The band receives thunderous applause from audiences packing huge auditoriums and stadiums across the country, but the cheering fans never suspect that the man who performs so brilliantly on the keyboard is a Georgia tree farmer.

They always find out in every city, however, when Mick Jagger, leader of the Rolling Stones, introduces his musicians at the conclusion of a concert. He introduces his keyboard play-

er as "Chuck Leavell from the backwoods of Georgia," but the Georgian doesn't mind the good natured reference to his Charlane Plantation, a Twiggs County retreat near the Ocmulgee River that encompasses 1,186 acres of woodlands, winding roads, forest trails and a charming, rambling country home built in the late 1800's.

Charles A. (Chuck) Leavell, a native of Alabama who played with the Allman Brothers when that band hit the top of the charts in the early 1970s, was recently on a national tour with the Rolling Stones, generally regarded

by critics as the greatest rock and roll band of all time. When there is sufficient time between engagements, or "gigs" as he puts it, the musician said he is always anxious to head home to Georgia to relax at the plantation and to be with his wife, the former Miss Rose Lane White, and daughters Amy, 14 and Ashley, 7.

RELAXING IN THE WOODS

Part of his relaxation back home consists of walking or riding a horse through the woods to check on forest tracts in various stages of growth and food plots that have been planted to accommodate an increasing quail population. Visits home give him an opportunity to set up thinning, harvesting and tree planting schedules.

Close friends declare that forestry is not a hobby with Leavell, it's serious business. The musician and his wife are certified Tree Farmers who strive to carry out provisions of a detailed management plan prepared by a consultant forester. The plantation is divided into 33 stands, ranging from four to 112 acres, and aerial map inventories, projections and recommendations in the plan are helping the couple gain the potential from the land. They have realized a good profit in the sale of sawlogs, pulpwood,

Leavell, at right, warms up with Mick Jagger prior to a concert. Although the musician enjoys his role as a member of a world famous band, he said he seizes every opportunity to spend some time on his Georgia plantation between engagements.



wood chips and Christmas trees and they always faithfully replant harvested areas and work to protect their forest from fires, insects and diseases.

OTHER VALUES APPRECIATED

But Leavell is quick to point out that there are dividends other than monetary considerations in caring for the land; there is pride and pleasure in just walking through the peaceful woods and enjoying the changing seasons. When he is on tour and decked out in a flashy stage costume for a performance, someone who has just learned of his tree farm will invariably wisecrack: "Is that what you wear down in your woods in Georgia?" When he returns to his woods on the plantation and trades his glittering show biz wardrobe for blue jeans and boots, he also leaves the glamour and high excitement of the concert circuit behind in exchange for the tranquility he finds in his well managed forest and leisure time he spends on the wide front porch that he has added to the landmark farm house.

"It's a wonderful balance," Leavell said, "I enjoy being with the band and playing all the large cities before large audiences. It's fun and it is very rewarding, but I always welcome a break so I can come back to the serenity of the Georgia countryside." He said he didn't know the first thing about "forestry" when his wife inherited the large acreage from her grandmother and they moved onto the property in 1981, but now he has read books, consulted foresters and neighboring landowners and completed a course in woodland management to become quite knowledgeable on the subject. His wife, who worked with the organization that managed the Allman Brothers Band and met and married Leavell during the band's heyday, agrees that "Chuck knew nothing about trees until we moved to the country. Before that, I never saw him even pick up a book or any kind of literature on trees."

WIFE KNEW FORESTS

Mrs. Leavell, who grew up in pine-wooded Twiggs County in Central Georgia, said she acquired a love and appreciation of the forests at a tender age. "I was about four when I first started riding through the woods with my grandfather and he would stop the truck and point out different kinds of



Tree Farmer Leavell examines some rapid growing pines on his plantation near Macon. Below, Rose Lane Leavell is shown in her boutique, an enterprise which she said was financed by the sale of pine trees.

trees," she said. Her grandfather, the late Alton White, Sr., worked in acquiring and harvesting timber for a large

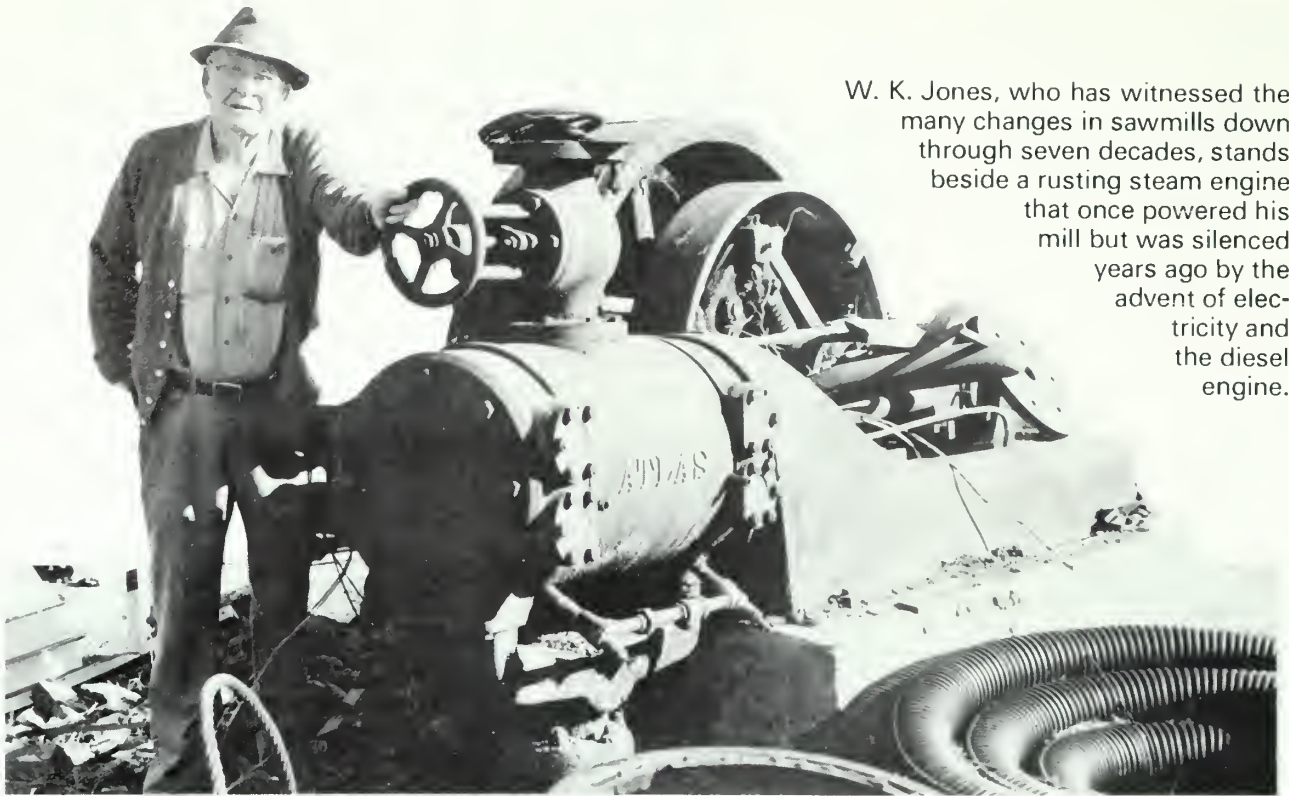


lumber company and believed strongly in reforestation long before the practice of planting forest trees became commonplace. "I was very young at the time, but I have a clear memory of watching a farm hand ride on the back of a tree planter and drop those little pine seedlings in the ground," said the granddaughter.

The Leavells were living in Macon when she inherited the rural property. "I was a country girl and I never wanted to return to the country to live," she said, "but when we moved to the farm it was a good thing...it was a revelation for Chuck. He loves the place and he is a very hard worker."

NOT GENTLEMAN FARMER

Leavell is definitely not a "gentleman farmer" who delegates all the labor to hired hands. Although he employs some help, he often pitches into work himself by planting pine seedlings by hand with a dibble, shearing Christmas trees, and chemically killing understory that retards the growth of some of his pines. He said assistance (Continued on Page 17)



W. K. Jones, who has witnessed the many changes in sawmills down through seven decades, stands beside a rusting steam engine that once powered his mill but was silenced years ago by the advent of electricity and the diesel engine.

SAWMILLING FOR SEVENTY YEARS

AND STILL GOING STRONG!

Veteran sawmill owner W. K. Jones has seen so many changes in the manufacture of lumber during his 70-year career that he could write an interesting and colorful history of the industry.

He recalls riding on a mule that pulled logs out of the forest when he was only eight and at other times watching long rafts of logs drifting down the river to the mill. He came along when mills were powered by steam and the work week didn't end until the whistle blew late on Saturday afternoon.

Illustrative of the changes Jones witnessed is his remembrance of the transition from horse drawn wagons to the automotive age. "I learned how to drive in a Model T Ford," said Jones, who continues to manage the W. K. Jones Lumber Company in Brooklet, a

small town in Bulloch County, "and the first thing I did was go straight into the water and drown it out." He said that in those early days there were few

At the outbreak of World War II, Jones escaped being drafted because the Army felt he could be of more service running a sawmill and providing much needed lumber to build barracks and other military structures than fighting the war.

bridges across streams and rivers and automobiles had to drive through the water -- often drowning the engine.

Jones' memory of his first driving experience is only one of the many collected in his long life and career. His earliest recollections are of working for his father in his sawmill. "If I was in school, I was working with my father," he said. "I liked the mules and oxen that were used to pull the logs out of the woods." Not all of his work was enjoyable. One such job was being a "sawdust doodler." He said he would carry the sawdust away in a wheelbarrow to a big pile." At that time, sawdust was considered worthless, according to Jones, and was piled high in the backlots of sawmills. "I would never have guessed that sawdust would be worth something one day. We used wood shavings to burn

the boiler, but the sawdust wasn't used for anything," he said.

Jones was born in Laurens County, went to school in Mount Vernon and eventually settled in Brooklet, where he started up a sawmill with his father. After his father's death, he bought out the remaining shares of the company, renamed it, and officially became the sole owner of W. K. Jones Lumber Company.

Later he married a Brooklet girl named Nellie and started a family. He and his wife have three sons, Jerome, who works with his father, Jarell and Jeffrey, and one daughter, Jacquita.

Early in his mill experience, Jones helped manufacture barrel staves. Hardwoods were used to make barrels for turpentine. Cypress was used for syrup barrels and oak for oil and crease. When the demand for wooden barrels diminished, Jones concentrated on pine lumber.

At the outbreak of World War II, Jones escaped being drafted because the Army felt he could be of more service running a sawmill and providing the much needed lumber to build barracks and other military structures for fighting in the war. "We only had six men to run the whole mill during the war," he said, "all the rest were away in the Army." He said that the federal government would buy practically all the lumber he could produce, and added, "in those days, people needed a permit to buy lumber for themselves because the Army needed most of it, and what was left was closely rationed."

Jones said that the Bulloch County Forestry Unit has been invaluable to him in maintaining and managing his pine forest. "I give the Forestry Commission a lot of credit," he said, "they've been there when I needed them." According to Jones, the Commission has been extremely helpful with his reforestation management. "I plant some trees every year," he said, "and I cut off only the big timber."

Vernon Owens, ranger for the Bulloch County Forestry Unit praised Jones for his avid support of reforestation and his help in promoting fire safety. "Mr. Jones has supported the new fire permit law wholeheartedly," the ranger said.

Trucks are now used to haul logs to sawmills, bridges span most of the state's streams and rivers, sawmills run on electric and diesel power and it has been many years since logs have been seen floating down the rivers. There have been a lot of changes in Georgia and in the sawmill business, and W. K. Jones has been around to see almost all of them. □

Ranger Vernon Owens of the Bulloch County Unit and Jones examine an old boiler on the grounds of the sawmill in Brooklet. The back lot of the mill is strewn with old boilers, engines, fly wheels, trucks, winches and other discarded relics that tell the history of sawmill machinery and equipment.



FOREST FARMERS ANNUAL MEETING SLATED FOR MAY

Persons attending the 49th Forest Farmers Association Annual Meeting and Southern Forestry Conference May 23-25 will be able to participate in educational programs, take forestry tours and visit Colonial Williamsburg.

The conference will be held at the Williamsburg Lodge and Conference Center. A number of noted forestry experts will discuss up-to-date information on developments in forest management, environmental issues, forest taxation and pending legislation.

Byron (Tag) Edwards, executive vice president of forest products, Champion International Corporation, Stanford, CT, will identify various constraints facing timber management in the South and zero in on the conference theme: "Forest Farmers: An Endangered Species?"

Other featured speakers will include Senator Elmon Gray, Gray Lumber Company, Waverly, VA, who will tell us his experience with effects of land use regulations on forestry. Dr. Robert Abt, a noted economist from the University of Florida, will discuss constraints to future timber supply; Philip Nacke, an environmental attorney in Washington, D.C., will address the rights of property owners; and C. Randall Nuckolls, Forest Farmers Association Washington representative, will discuss issues on Capitol Hill of interest to timberland owners.

A Forest Taxation Panel has been scheduled with three noted tax experts participating. Congressman Ed Jenkins (D-GA), a leading member of the House Ways and Means Committee, has been invited to make a special address.

For further details, contact Forest Farmers Association, Box 95385, Atlanta, GA 30347

SEMINAR STRESSES GLOBAL MARKETING

A common denominator of interest stressed through a recent seminar is the need for Georgia's forest industries - as well as other industries - to compete by developing global marketing strategies. Another point of emphasis was the increasing need for the U.S. to upgrade education standards so employees can compete effectively.

Subjects during the two-day "Wood Products Value Added Seminar" ranged from financing and training opportunities to the latest methods of mar-



keting wood products. The effects of legislation, urbanization, and recreation on North Georgia forest lands were given special attention. It was pointed out that although Georgia has been highly successful in cultivating the pulp and paper industry, more concentration is now needed on attracting the furniture industry.

Fred Allen, the Commission's Chief of Research, coordinated the meet and described the sessions as an opportunity to provide information to the interested entrepreneurs on the potential for manufacturing forest products.

"The seminar was very successful," Allen said. "Operating businesses learned new methods of increasing the range and quality of products made from wood, while potential entrepreneurs learned of opportunities and resources availability."

In relation to education and increasing foreign competition, David Clifton of Georgia Tech's economic development Lab, addressed the seminar and told a story reflecting what the U.S. is



Ranger Monroe Gaines of the Berrien County Forestry Unit recently created this attractive sign to be placed at most highway entrances to the Commission's Eighth District. The colorful and eye-catching signs have a red background, with the map of the district's 11 counties routed in the wood and painted white. The talented artist and sign painter stands behind this sign on U.S. Highway 82 on the Berrien-Atkinson County line, the first to be erected. The ranger also has painted a large wall mural for the Commission's Forestry Museum in Macon and has made other contributions to that new facility. His work also is seen on the side of one of the Commission's large highway vans, which is usually parked at the Cook County Unit in Adel for exposure to the traveling public on busy Interstate 75.

confronted with in foreign education and business competition of the future.

Clifton said one of his friends was scheduled for an eight-hour plane flight. When the friend arrived at the airport, he discovered he would be traveling in the section with a group of Japanese teenagers, who were engaged in noisy horseplay. The traveler tried to get his seat changed to another section, but it was too late; so he resigned himself to an eight-hour ride with the noisy group.

However, when they boarded the plane the Japanese teenagers sud-

denly grew quiet, pulled out textbooks, and quietly studied for eight hours!

Seminar sponsors included the Commission, U.S. Forest Service (state and private); University of Georgia Cooperative Extension Service - Forest Resources Department; Limestone Valley RCD Council; Georgia Power Company - Industrial Marketing - Forest Products; TVA - Forest Industry Development; Oglethorpe Power - Amicalola EMC; Georgia Department of Industry, Trade, and Tourism; and the Georgia Mountain Regional Development Center.



Forestry Consultant Walter Fox, left, and David McClain, Gainesville district forester, examine pine seedlings planted on a 320 acre site preparation area in North Georgia mountains.

MOUNTAIN PROJECT MAY EMERGE AS ROLE MODEL

By Bill Edwards

Site preparation in excess of 300 acres initiated by a single, non-industrial landowner with no outside financial assistance would be rare in most sections of the state. However, in the North Georgia mountains it is unheard of—especially when such acreage is site preparation for planting pines.

"We certainly never had anything like it around here," said Van Moore, Gainesville district forester for the North Georgia mountains project expected to take a year to complete. Moore added that in a few months this project will be an accomplished reality.

The case in point is a 546-acre White County tract located in rugged mountainous terrain near Cleveland. The land was bought almost 40 years ago by Charles Gay, a Camden, South Carolina businessman associated with a national trucking firm. Gay, who now lives in South Carolina, has given power of attorney regarding the entire project to Walter Fox, a consulting forester based in the nearby town of Dalton. Fox is no stranger to large forestry operations, he became a private consultant after 30 years with the U.S. Forest Service.

This project is unusual for a num-

ber of positive reasons," Fox said. "From my standpoint, it is unusual for a landowner to follow advice of the consulting forester almost to the letter to accomplish designated goals. The

...140 acres have been left as a carefully preserved buffer zone to protect the scenic Tesnatee River and tributary streams running through the tract. The buffer totals more than 25 percent of the tract.

result is that this is turning into an abbreviated synopsis of *Recommended Best Management Practices for Forestry in Georgia* (Commission manual for Best Management Practices -BMPs).

Fox believes that in time, the mountain project may be recognized as a role model of sorts. He gives the following breakdown or project guidelines: 16 acres mechanical thinning of 10-year-old natural loblolly stand, 50 acres site preparation for white pine planting, 270 acres site preparation

for loblolly pine planting, and 130 acres of hardwood preserved for game habitat. Thus the total area for planting pines is 320 acres.

Another impressive factor Fox points out is that 140 acres have been left as a carefully preserved buffer zone to protect the scenic Tesnatee River and tributary streams running through the tract. Since the buffer totals more than 25 percent of the tract, it is obvious that streamside management is a priority. Although this environmental concern will not produce immediate financial rewards, downstream neighbors and future generations will profit for many years to come.

"And the land will be worth more in years to come because of this sort of management," Fox said. He points out that immediate financial profit is not the objective of the landowner, since mountain land in this area can be divided into small lots and often sold for thousands of dollars an acre.

Fox emphasized that this is not a totally preservationist project, but a well managed, carefully considered plan to establish that frequently elusive blend of environmental protection with timber production, game man-

(Continued on Page 17)

URBAN AND RURAL BLEND INCREASING FIRE POTENTIAL



Georgia is experiencing a statewide overlapping of urban and rural environments. The paradox is particularly widespread in counties surrounding the state's metropolitan centers.

Although the condition is a sign of the times that goes with progress, the positives are burdened inevitable negatives. One of the most serious negatives of the urban-rural blend is potential for fire.

The potential creates a new challenge for the state's 20-year-old Rural Fire Defense program (RFD), a program initiated by the Commission to complement the state agency's forest fire protection program. At the time, RFD was designed as a "rural" program, but times have changed and Commission officials are finding new demands created by increased mobility, concentrated populations, and changing lifestyles.

The Commission and RFD personnel work in a cooperative effort to develop the best fire defense system possible in relation to changing urban/rural needs. Basically, the Commission works in an advisory and assistance capacity.

Roger Browning, Commission rural fire defense specialist, cited the "Urban-Rural Interface Problem" as

the dominant factor of the new challenge. Browning said the relentless exodus of Georgia city dwellers to small farms and sprawling, woodland suburbs has created a different role for many RFD units.

"The whole thing has taken on new perspective," Browning said. "For instance, ten years ago, a fire in a particular area may have burned

"There has been a lot of improvement in equipment and training since '68, but you still can't put out a house fire with a tractor. That's why RFD is becoming so important to Georgians."

50 acres of trees. But now, that fire in the same area might threaten a dozen houses or an apartment complex, as well as woodlands. And, of course, the problem is compounded by the fact that people are the leading cause of fire."

Browning said this type of fire threat in rural communities was the

main reason for the Commission initiating RFD as far back as 1968. He pointed out that although the Commission is generally responsible for woods fires outside the city incorporated limits, this has never prevented forestry units from being continually called to structural and vehicle fires in rural areas. However Commission fire fighting equipment consists of heavy duty crawler tractors that plow breaks when fighting forest wildfires.

"There have been a lot of improvements in equipment and training since '68, but you still can't put out a house fire with a tractor. That's why RFD is becoming so important to Georgians," Browning said. "We're doing everything we can to make the public aware of this need, because fire is something the average person does not think about until it happens."

Browning said when RFD began in 1968, fire fighting equipment was loaned to a community through a government entity. This "entity" was the board of county commissioners or mayor of a town with an active, registered state charter. Today, RFD communities are still required to operate under similar guidelines. RFD was made possible by the Clark-

McNary Act, Section 2, of 1924 and the Federal Administrative Act of 1949, which authorized transfer of excess government property to the Commission through the U.S. Forest Service's Cooperative Fire Control program.

The program seemed cut and dried on the surface - even simple. But there were problems. Since the first RFD fire fighting equipment consisted mainly of excess military vehicles, there was no standardized requirements, so availability and maintenance became nagging problems. Eventually the surplus of military vehicles began to dwindle and replacement parts became difficult to find. "The Commission recognized an alternate plan had to be devised," Browning said.

In 1975, the "Fire Knocker" program was originated and introduced into a Henry County rural community. Browning describes the Fire Knocker as a "self-contained slip-on fire fighting unit that can be mounted on an appropriate chassis."

Under present RFD regulations, a community is given a 50-year lease on the equipment. However, the advanced equipment and expanded program have become more sophisticated. The Commission's statewide RFD program is currently operating 678 leased Fire Knockers in 143 counties. There are also 57 leased initial attack trucks and 146 units which haul varying capacity water tanks - these are equipped with pumps. There are also numerous other types of fire fighting support equipment assigned to the 676 station locations throughout the state. Commission records show that Georgia RFD units responded to 2,361 fires calls during Fiscal Year 1989.

Despite the demands, Browning said the program has made great progress under the leadership of Don Freyer, Commission coordinator of the program.

"This is another plus factor of RFD," Browning said. "It creates solidarity. I have never seen a community that has not not been drawn closer together after a RFD program was established."

However, the most obvious benefit of the Georgia Forestry Commission's involvement in the RFD program is protection against fire. □

FOREST STEWARDSHIP PROGRAM AIMED AT WIDER MANAGEMENT OF WOODLANDS

By Walker Rivers

Rivers, a staff forester in the Commission's Management Department, has been named state coordinator for the newly established program.

A proclamation by Governor Joe Frank Harris has launched Georgia's new Forest Stewardship Program - a program that involves this state in a nationwide resources management campaign coordinated by the U. S. Forest Service.

Forest Stewardship is, quite simply, the responsibility to manage forest property with proper regard to the rights and needs of others. Forest Stewards are custodians of our rich forest resources and their conscientious

For the first time ever, landowners will be able to have management plans for their woodlands established by foresters, wildlife biologists, soil scientists, and recreation experts, all working together to coordinate multiple use management recommendations.

management of these resources can provide many benefits to both themselves and to society as a whole. In addition to producing timber and its

related income, stewards seek to improve wildlife habitat, protect soil and water quality, provide recreational opportunities, and enhance aesthetics and the environment.

The uninformed might think that the production of so many varied benefits from one tract of forest land is impossible, but nothing could be further from the truth! Stewardship management, also known as multiple use management, modifies many different management techniques so that numerous benefits are produced simultaneously. This type of management takes skill, knowledge, and dedication.

The goal of the Georgia Forest Stewardship Program is to encourage as many landowners as possible to practice stewardship management on their lands. Since most landowners are unfamiliar with stewardship management, it will be necessary for a variety of resource professionals to work together to educate and guide interested landowners.

Department heads from the Georgia Forestry Commission, the Georgia Department of Natural Resources, the Georgia Soil and Water Conservation Commission, the USDA Soil Conservation Service, and the University of Georgia Cooperative Extension Ser-

(continued on pg. 14)

KURT SUTLIVE HONORED BY NEWSPAPER GROUP

The name of Kurt Sutlive, who became public relations manager for Union Camp Corporation in 1943 and later served as president of the Georgia Forestry Association, has joined the list of distinguished Journalists in the Georgia Newspaper Hall of Fame.

Sutlive, who died in 1985, learned newspaper reporting from his father, William Greene Sutlive, and began his newspaper career with the Americus Times. He later bought the

Blackshear Times, which he published and edited.

The Journalist may have been best remembered after his newspaper career for the work he did for the Georgia Forestry Association. He took pride in having a part in the passage of the "No Fence Law," which ended the practice of owners allowing their livestock to roam free and for forests to be burned at will to provide faster growing early springtime grass for grazing by free-ranging cattle.



Senior Ranger Homer Bennett is well known and respected by forest landowners and others in his tri-county unit.

"I've never had a really close call," Homer Bennett, the senior forest ranger of the Lamar-Pike-Spalding Counties Forestry Unit, said of his work in fire fighting, "and I attribute that to good training and experience."

Some of that valuable experience was received when Bennett spent two years in the Army in a heavy artillery unit after graduating from Pike County High school. He received the combat badge, good conduct award, and infantry badge while serving the military in Korea. "I learned a little bit about everything while in the Army," he said.

Except for the two years he spent in the military, Bennett, a Pike County native, has not strayed too far from home. He enjoys spending time with his wife of 34 years, Lou, and three children Bonnie, Cheryl, and Dennis. He is a member of the New Hope Baptist Church and offers his fire fighting expertise to the Pike County Volunteer Fire Department. During his rare free time, he enjoys hunting and fishing with his son.

Bennett began working for the Commission 21 years ago as a forest patrolman and has worked his way up the ranks to his present position. "I've

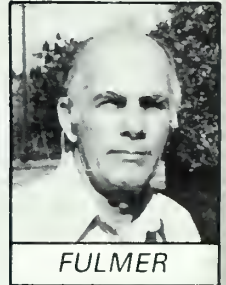
LAMAR-PIKE-SPALDING FORESTRY UNIT

been right here at this unit for my whole career, and plan on staying here," he said.

The ranger said his crew works hard on such on-going projects as educating the public in fire safety and encouraging landowners to plant trees. "I really enjoy our programs with elementary school children," Bennett said. "We try to teach them about safety in the forest with the use of films, slides, and demonstrations." He is presently trying to get Griffin, Barnesville, and Zebulon certified as tree cities and is working closely with real estate agents in an effort to distribute informative literature to land

Forester Lee Milby prepares to show a forestry educational film to a civic club audience.

The Lamar-Pike-Spalding Unit was selected as the number one operation in North Georgia last year, and I would have to say that I wholeheartedly agree with this decision of the selection committee. This unit is consistently one of my top performers. The grounds and equipment are always in top condition and the employees are always ready to carry out their duties. The field day we had in Griffin in 1987 had 650 people in attendance, and there were about 1,230 people at the 1989 field day and both of these special events would not have been as good as they were if it had not been for Homer and his people doing a big job. We are also proud of the performance of Lee Milby, our forester who works out of the Pike County office.



FULMER

Preston T. Fulmer
Newnan District Forester

buyers concerning reforestation, forest management and fire safety.

According to Bennett, debris burning that gets out of control is the num-



er one cause of forest fires in his area just as it is across the state, but the fire permit law has significantly reduced such fires. "I feel we have had 100 percent cooperation with the fire permits," he said. "I have only issued two citations since the law came into effect." Bennett explained that with the help of the news media, word on the permits and how to obtain them has been spread to most everyone.

In reflecting on his lack of harrowing firefighting stories, Bennett explained that safety of the firefighters comes first. "We never let an inexperienced person combat a fire alone," he said,

LEE MILBY

Forester Lee Milby, who serves landowners of the tri-county unit, as well as neighboring Upson County, doesn't know why he decided to get into forestry when he left his hometown of Meansville to attend the University of Georgia in the early 1970's, but assumes it "just came naturally" following a childhood love of playing along the creeks and throughout the woodlands near his home.

The forester came with the Commission in 1985 after having served some ten years with the South Carolina Forestry Commission. He said he pleased that the district office in Newnan assigned him to the unit, as he is familiar with the four counties and serves many landowners "who were once my boyhood friends."

In addition to working with rural forest landowners in the area, Milby handles urban forestry responsibilities in Thomaston and is a facili-



Patrolmen Jerry Maddox, left, and Jeff Kenerly consult a county map before starting a day of pre-suppression firebreak plowing for area landowners.

erator for the Project Learning Tree project. He also had earned the Silver Hat Award for making 50 inspections in the Georgia Tree Farmers Program.

Milby researched and wrote material on his hometown and an article on

his experience in the Navy and National Guard where he was a mechanic and truck driver. "I learned a lot about mechanics in the service," he said.

When Maddox is not repairing fire extinguishers, fighting fires or hunting arrowheads, he enjoys woodworking. "I like to build birdhouses and decorations," he said. "I give most of them away as presents, but have sold a few." He also enjoys spending time with his wife Sandra and attending New Salem Baptist Church, where he is a member.



ANOTHER IN A SERIES OF STORIES ON OUTSTANDING COUNTY FORESTRY UNITS

the forestry unit for the recently published History of Pike County.

The forester is married to the former Miss Denise Anderson of Atlanta and they have one son, Jesse. The family is active in Meansville Baptist Church.

JERRY MADDOX

"I look for them after I dig firebreaks or after a controlled burning," Jerry Maddox, a forest patrolman for 14-years with the unit, said of his hobby of searching for arrowheads and other Indian artifacts. He is a member of the Flint River Gem and Mineral Society and has displayed his treasures at schools and public functions.

Maddox is in charge of maintaining the equipment at the unit and repairs fire extinguishers from around the state for the Commission. He attributes his mechanical expertise to three years spent at Griffin Tech, and

JEFF KENERLY

"I plan to make a career out of this," Jeff Kenerly, a forest patrolman with the unit said. "I've only been here for 13 months, but I enjoy the job and really like the people I work with."

Kenerly graduated from Abraham Baldwin Agricultural College in December of 1985 with an Associate Degree in Marketing and Business Management and an Associate in Forestry. He worked as a forestry consultant, and then for a landscaping company in Carrollton. It was while working in Carrollton that he met his fiancée, April Terhune.

Kenerly's duties with the Commission include maintaining and repairing equipment and fixing fire extinguishers. He learned much of his mechanical skills from working in his grandfather's lawnmower shop as a child

STEWARDSHIP PROGRAM

(continued from page 11)

vice joined with Governor Harris in signing the State Stewardship Plan which pledges the cooperation and support of these agencies in carrying out the state program.

For the first time ever, landowners will be able to have management plans for their woodlands established by foresters, wildlife biologists, soil scientists, and recreation experts, all working together to coordinate multiple use management recommendations. This team approach to land management assistance is new and unique to the program.

Landowners who wish to participate in the Stewardship Program will be asked to sign a creed which indicates their intent to practice stewardship management. Each Commission district will have a District Stewardship Forester who will coordinate the construction of a stewardship plan with members of the other cooperating resource agencies. Each landowner will indicate a primary and a secondary management objective from a list which includes timber, wildlife, soil and water conservation, recreation, and aesthetics. The stewardship plan will reflect the landowner's main objectives, while providing recommendations to enhance other values as well.

When a landowner has implemented the stewardship plan, he will be nominated for the prestigious and coveted "Forest Steward" designation. An inspection of his land will be conducted by a resource team and his management evaluated according to a strict list of criteria. Those who achieve high standards of stewardship management will be rewarded with the Forest Steward designation, a plaque, a property sign, and membership in an exclusive group of landowners who are the state's top woodland managers.

Georgia's program is directed by a state committee chaired by Commission Director John Mixon. An inclusive training program for participating agencies is planned for spring of 1990. A statewide media campaign will also be utilized to promote the program and generate statewide landowner interest. □



Rebecca Cabe's title is tower operator, but she attends to many other duties at the busy unit headquarters. She handles much of the radio communications, clerical work, and other functions during a typical day.

and from a high school automotive course. He also has the honor of playing Smokey the Bear during school programs on fire safety. "I like being with the kids," he said, "but some of the smaller ones are scared of me when I'm in the Smokey costume."

REBECCA CABE

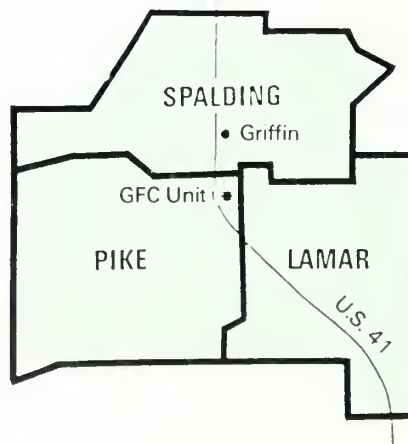
"I like everything about my job," Rebecca Cabe, the fire tower operator for the unit said. Cabe has been with the Commission for almost ten years and plans to stay "as long as they will have me," she said.

Cabe was born in Washington, D. C. and lived in Florida before moving to Waycross, where she graduated from Ware County High School and met her husband, Dennis. They have a daughter, Jessica, 11, and are members of Mount Zion Methodist Church.

Cabe says "90 percent of my time is spent typing reports, answering calls, and giving out information." She said she receives 15 to 20 information calls per day and "if I can't answer their questions, I can refer them to someone who can."

The time she spends up in the tower depends on the weather classification. "Sometimes I'm up there for hours, sometimes for only a short time, depending on if it is fire season or not," she said.

Cabe's skill as an artist is used more than just for a hobby. She has designed promotions for the unit and is presently working on a fire prevention campaign that she hopes will be used statewide. □





RICK HATTEN THE RANGER



RICK HATTEN THE KNIGHT

RANGER RICK CROWNED KING RICHARD

Rick Hatten, Commission ranger for the Barrow-Jackson Unit, has transcended his contemporary position by being crowned king of six Southern states. The honor was conferred by an international medieval organization called the Society for Creative Anachronism (SCA). States under King Richard's sovereign rule include Georgia, Alabama, Arkansas, Tennessee, Louisiana and Mississippi. "Florida has enough subjects to be declared a kingdom unto itself," said Hatten in a tone and vernacular befitting the most medieval of courts. Adopting such speech patterns is one of many SCA requirements, and Hatten can slip into medieval rhetoric at the drop of a suit of armor.

Although it is all in good fun, SCA members take their king seriously. Rick Hatten (now King Richard) attained the royal station by emerging victorious in the finals of a six-state tournament. Competitors fought with weapons from the Middle Ages ranging from the two-handed sword to the axe.

For safety reasons, all weapons are made of wood, but Hatten pointed

out that their weight is comparable to steel counterparts. He described being hit over the head with a five-pound wooden sword as "an unusual experience." All tournament combatants wear armor typical of the Middle Ages. Hatten wears a 40-pound suit of armor including a chain-maile vest that took him more than 150 hours to weave.

He explained that although the armed tournaments are popular, fighting with medieval weapons is but one aspect of the organization. "The Society recreates the Middle Ages not as it was - but as it should have been," he said. "Strife, pestilence, and political conspiracies have been replaced with emphasis on grace, beauty, chivalry and brotherhood."

A graduate of the University of Georgia with a degree in forestry, Hatten became interested in the Society eight years ago when he and his wife, Karen, attended a medieval fair at Lake Lanier Islands. Hatten, his wife, and two children joined the SCA. He said the organization is family oriented and it has nothing to do with the mystical or occult.

Hatten explained that the Society which started in California in 1966,

now has more than 15,000 members worldwide and covers a period from the fall of the Roman Empire to the 1600s. Georgia has approximately 450 members.

According to organization guidelines, members adopt a character, then dress and act accordingly. The role of knight, however, cannot be personally adopted, but must be appropriately granted by authorized peers. Hatten was knighted long ago as Sir Richard of Raefus. Since attaining knighthood, Sir Richard has attended many isolated retreats where members recreate the medieval lifestyle focusing on interests from calligraphy to medieval wood-working.

However, the tournaments of battle remain one of the most popular activities. All wooden weapons used for practice and actual tournaments are made of rattan - a vine-like wood from the Phillipines.

"Hickory was used at one time," Hatten said, "but if it breaks, it can splinter and cause serious injury."

An assortment of medieval weapons (all made of wood) are available to the aspiring knight. In addition to the usual selection of swords and spears,

there are specialty weapons such as the glaive - a combination sword and axe. Then there is the halbred, a weapon made popular by the Swiss - which looks like a wide axe with a spear point on top and a small stabbing point on the back. The "great sword" is also popular among combatants; this is a heavy two-handed sword about six feet long.

Although Hatten has used all these medieval weapons in battle, he prefers the traditional one-handed sword and shield. As a dedicated knight - and unto this day - King Richard devotes numerous hours each week practicing the many attack and defense maneuvers used with the sword and shield.

Despite the intensity of the tournament battles, Hatten says there are relatively few injuries and no deaths. "There's actually more danger of heat stroke in the summer," Hatten pointed out. "The padded clothing and heavy armor can really get hot."

Win or lose, the participant's honor is at stake. Qualities of truthfulness, restraint, generosity, gallantry and courtliness must be maintained at all times to remain in the Society's good graces.

"It is considered unchivalrous to strike an opponent when he is down," Hatten said. "Honor is always more important than victory."

True to medieval accuracy, Hatten's leather covered shield is made from laminated pine (shields of the Middle Ages were frequently crafted from laminated wood). His coat of arms is the Cross of Moline and a single pine tree.

And thus bearing this imposing coat of arms, King Richard does rule his true and loyal subjects with a kind but firm hand in the manner befitting a noble monarch: Defender of the weak - Protector of the oppressed - Inspiration to the wretched - Uplifter of the down-trodden - Custodian of grace - Punisher of the unjust - Enemy of all evil. Knowledge of his magnanimous and favored reign has spread to the hinterlands of the kingdom, while his prowess with the sword has become legend in his own time.

Meanwhile, back at the Barrow-Jackson Unit, his loyal subjects (patrolmen) Earl Carter and James Davis remain unimpressed by Ranger Rick's elevation to royal status - but no one wants to cross swords with King Richard. □



Georgia has 25 counties that benefited from more than \$865,000 in revenues collected on the Chattahoochee and Oconee National Forests during fiscal year 1989.

Ken Henderson, supervisor of the Chattahoochee-Oconee Forest explained that the funds represented 25 percent of all revenues collected by the Forest Service from the use of national forest land in Georgia. Most of the money was derived from timber sales, recreation user fees and grazing.

The state is required to distribute the funds to counties where Forest Service lands are located, and are to be used for schools and roads.

"Some counties will receive more dollars than others, based on the number of acres of national forest land within their county," Henderson said.

This year's dollar returns to Georgia counties were higher than last year's total (\$797,320) by over \$69,000. Overall receipts were up for the Chattahoochee-Oconee Forests, but timber receipts were down due to lower prices for timber killed by the southern pine beetle.

Money distributed ranged from \$78,744.96 for Rabun County to only \$3.19 for Catoosa County from revenues generated from the Chattahoochee National Forest. Other counties receiving money were Banks, Chattooga, Dawson, Fannin, Floyd, Gilmer, Gordon, Habersham, Lumpkin, Murray, Stephens, Towns, Union, Walker, White and Whitfield.

Money from revenues collected from the Oconee National Forest ranged from \$149,611.78 for Putnam County to \$669.09 for Oconee County, with the remainder being divided between Greene, Jasper, Jones, Morgan and Oglethorpe Counties.

This year's payment to Georgia is part of a national distribution of \$362 million to 41 states and Puerto Rico by the USDA Forest Service.

ROCK MUSICIAN

(Continued from Page 5)

from the Twiggs County Unit, Georgia Forestry Commission, "has been incredible since we've been on this place" and he marveled at the swiftness in which the unit's firefighters responded to a recent wildfire in his woods.

The Leavells are unable to spend as much time tending their pines down on the farm as they would like. He is often on the road with the band; she has a career of her own. She owns and manages a fashionable boutique in Macon and explained that the shop is a "dream come true" as a result of pine trees.

Mrs. Leavell and her brother, Alton, harvested a tract of virgin timber in 1977 on land they owned in Jones County. "I suddenly had a large amount of money," she said, "and thought of all the things I could do with it like traveling abroad, but I had always wanted a boutique and that's where I put my money." She had studied fashion merchandising while at the University of Georgia.

The forestry unit plowed firebreaks around the wooded areas shortly after the Leavells took possession of the property, but Leavell now plows the breaks with his farm tractor and has converted many into convenient forest trails. The network of firebreaks divide the woodlands into parcels that are controlled burned on a rotation basis, a system that he said provides safety and also protects wildlife habitat.

INTEREST NEVER SLACKENS

The musician's interest in trees apparently doesn't wane when he is back with the band. When the group rehearsed in Washington, Connecticut, for instance, he slipped out on occasion to the edge of town with a tree identification book in hand to study species native to that section of the country. The Rolling Stones were in port in Japan in February and that gave him an opportunity to inspect some strange and exotic trees of the Orient.

Mrs. Leavell said her father and her grandfather were practical foresters, good stewards of the land who were not technically trained in the forestry profession, but who carried out management practices that have perpetuated good timber stands.



Wild game enhancement is important to Leavell in the management of his multi-use forests. He has a rapidly growing quail population as a result of food plots planted in his woodland. An allied interest is the breeding of English Pointers

A rock star and a fashion merchandiser might not seem to be a likely couple to settle down on a secluded plantation, but Chuck and Rose Lane Leavell, Registered Tree Farmers No. 4804, are proud to make it their home, to further enhance the land that will one day be the responsibility of daughters, Amy and Ashley. □

MOUNTAIN PROJECT

(Continue from Page 9)

agement, etc.

"It offers a classic example showing that timber production can coexist harmoniously with such environmental factors as protection of the flood plane, and even preservation of certain historic aspects."

The historic reference is to the area's gold rush days. Site preparation has turned up numerous rocks shaped like tombstones, but the rocks are actually markers left by gold prospectors. One section of the tract has to be reached by crossing the swift Tennessee River in a four wheel drive vehicle. Above the crossing, a rectangular, concrete building looms over the river. The structure was intended as a power plant, built in anticipation of a gold rush town that never developed.

"Preserving this area and the environmental integrity of the river is a major concern of this project," Fox said, "Although there will be timber production not far away."

Van Moore, the Commission forester who has spent his share of time walking the area's sloping landscape, summed up the project by saying, "Everybody involved with the project is favorably impressed. We hope that the results will influence private as well as industrial landowners - and make it clear what can be accomplished on this sort of terrain when correct forestry management methods are applied." □



Hundreds of students entered the annual Smokey Bear-Woodsy Owl Poster Contest this year and these judges are making the final decisions. Left to right are Mrs. Bernard Bridges, Moultrie; Forest Ranger Donald Bennett, Colquitt County Unit; Mrs. James W. Phillips, Jr., state poster chairman; Urban Forester Raymond Norvell, Albany; Mrs. Bennie Ricks, Moultrie, and Senior Forester William Lamp, Camilla. The women represent the Garden Club of Georgia

GEORGIA COMPANY USES WHITE PINE, UNIQUE DESIGNS IN LOG CONSTRUCTIONS

By Clif Plumley

A resurgence in log home construction has spawned a multitude of companies dealing exclusively in modern log structures. Competition is tough as builders strive to rise above their peers by creating better and more innovative designs. Each wants financial prosperity, but the pride of owning or working for a company that produces a quality product is also a strong motive.

It is this ideology, the desire to provide the best product, that propels Don Mahaffey forward, according to friends and associates. Mahaffey's company, Fireside Log Homes, was started in 1984 as a result of his conviction that he could produce log structures that would exceed the quality and craftsmanship of such buildings being offered on the market at the time.

Attracted to the romantic, yet practical qualities of all-wood buildings, and confident he could build one better than anyone else, Mahaffey built his

first log home and featured it at the Atlanta Home Show in the Spring of 1984. This model was quickly followed by construction of a restaurant in Ellijay, and over the next five years, Fireside produced over 800 homes and created a network of 60 dealers in 22 states and two foreign countries.

Mahaffey, a resident of Decatur, decided to locate Fireside in the scenic

Log homes are no longer only weekend retreats or small cabins hidden away in the woods for rustic vacations. Some 85 percent of the homes built by Fireside are used as primary dwellings.

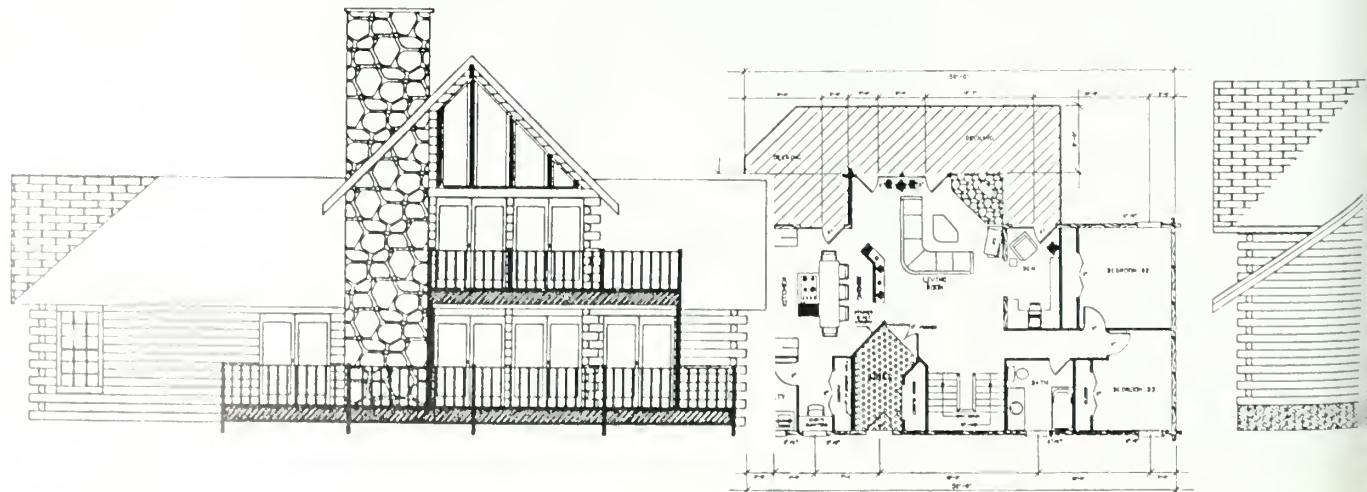
North Georgia town of Ellijay due to the abundance of white pine in and around the area, a species used in his homes.

"Gilmer County probably has the highest quality of white pine in the state," he said, "and relative to the rest of the world, we have unlimited sources."

Fireside presently buys timber directly from landowners and by bidding on timber cut from public lands, but Mahaffey said he plans to get involved with reforestation and eventually grow his own trees. This would allow him to control the quality of log homes from seedling to finished product.

Wood chips created when the logs are shaved are sold to a paper mill and shavings and sawdust are immediately utilized as floor coverings by the growing poultry industry, according to Mahaffey. "We eventually want to stall a wood-burning boiler for heat purposes," he said, "so we can use even more of the tree."

Logs for Fireside homes are shaved so that one side is rounded, the other flat plane. Grooves are carved into the logs so that the structure will have



ght and sturdy fit. Logs are cut according to the individual house plans and then loaded into containers at Fireside's plant in Ellijay to be trucked to the building site.

Another force behind the company's success is John Madsen, a native of Denmark and vice president of sales for Fireside. He emigrated to the United States in 1974 and began work with Mahaffey a year ago.

Madsen's title does not credit his more creative talents. He graduated from the Royal Academy for Fine Arts in Copenhagen with a degree in architecture and is currently creating a new collection of log home "fashions" for Fireside.

"Log homes don't have to look like cabins," Madsen said, "we want to do something new." His new designs will represent each of the seasons. The first "fashion" of this collection is "Whispering Spring." Every three months, according to Madsen, a new design that "captures the essence of the season" will be unveiled.

Log homes are no longer only weekend retreats or small cabins hidden away in the woods for rustic vacations. Some 85 percent of the homes built by Fireside are used as primary dwellings, according to Mahaffey, and although the structures are solid wood and many times are secluded, hidden away in the woods, the homes are spacious, comfortable, and contain all of the amenities of any modern home.

Although Fireside boasts an array of house designs, Mahaffey said that most people desire to make changes to the plans - customizing the home to their individual needs. He said his company is eager to customize plans or even design an entirely new house according to the buyer's desire.

Fireside homes are found mostly in the cool Blueridge Mountains, far away from the hustle and bustle of city life, but a few homes have been built in more urban settings or even in such a far away place as Guatemala.

"The house we sent to Guatemala was our first export," Mahaffey said, "but working through agents and by personal contacts between himself and prospective buyers, Fireside has taken strides in the world market with this high quality log homes and has already made plans to build a model in England and has completed a sale for a model home and 16-bedroom inn to Osaka, Japan.



John Madsen, vice president of sales for the company, looks out over a scenic mountain valley from the deck of a Fireside model home. Madsen, who has a degree in architecture, designs the homes. In photo below, Secretary Donna Dean checks the morning mail at the headquarters of Fireside Log Homes in Ellijay.

"This sale," Mahaffey said, "is only the beginning of a major export effort by Fireside." He added that the Japanese and other Pacific Rim countries love solid wood products, so the potential for sales of log homes in this region of the world is great.

The containers holding finished logs that are destined for Japan are transported by truck from Ellijay to Savannah where they are loaded aboard ships for a month-long voyage before docking in the Japanese port city of Kobe. The containers are then moved to the building site where Fireside personnel, armed with a con-

struction manual translated into Japanese, help with the erecting of the log structure.

"Log homes are appealing to people who want a less stressful lifestyle and demand very high quality," Mahaffey said, "and we want to do it better than anyone else in the world." So whether a Fireside house is to be built on a misty mountain in North Georgia or on a snowy slope in Japan, the innovation, the pursuit of perfection, and the vision of Don Mahaffey, John Madsen, and the rest of the Fireside crew is apparent in its timeless beauty and sturdy craftsmanship. □



FOOTNOTE TO GEORGIA HISTORY

COMMUNE DEPENDENT ON FORESTRY

The subject of communes triggers instant memories of the 60s when a malcontent hippie subculture withdrew from society; but even the most erudite of historians might be at a loss if asked to give details on a turn-of-the-century Ware County commune based on a forestry economy.

The socialist commune of Ruskin, established near Waycross, was short lived. Little has been recorded about this experiment - and even less has been recorded on the influence of forestry related activities on its brief survival from 1899 to 1901.

Located near Waycross on the Atlantic Coastline Railroad, only a few miles from the Okefenokee Swamp, Ruskin was part of a socialist movement sweeping the United States in the late 1800s. The goal was to dilute competition with cooperation, distribute income and social opportunity equitably, and escape abusive practices of capitalism. Socialism, fleeing England's Industrial Revolution, was seeking a new spawning ground in the U.S.

For a while, such diverse activities as a thriving turpentine operation and the philosophy of transcendentalism seemed to blend well. A generally well educated population of approximately 300 were attracted from all over the U.S. and abroad. Following in the footsteps of great thinkers like Ralph Waldo Emerson and Henry David Thoreau, intellectuals of the time were drawn to the socialistic climate. Georgia was advertised as a sort of Garden of Eden with cheap land, plenty of labor, no blizzards, and a year round range for stock that required no fencing.

Advertising placed little or no emphasis on forest resources, although similar groups of the time gravitated toward heavily forested areas for obvious reasons - such as building com-

munes. With no real concept of forest resources and management in existence, the attitude of a never ending supply prevailed. Trees were taken for granted, and often regarded as a nuisance to be cleared away so the land could be farmed.

However, virtually the entire Ruskin colony was hewn from surrounding forests and forestry related industries were essential to the group's prosperity.

Shortly after the Ruskin Commonwealth was incorporated in 1899, industry began to thrive on more than 1,000 acres designated for the colony. A small sawmill and planing mill were among the first establishments. Lumber was processed to build nu-

EDITOR'S NOTE:

This story is based primarily on a 1964 master's thesis "A History of Ruskin Colony, at Ruskin, Georgia." The project, now on file at the Georgia Archives, was submitted to The University of Georgia, College of Education, by Lillian Lee Corbett as a requirement for a master of education degree. Conclusions on forestry were drawn from this work and other sources.

merous structures including a railroad station, library, print shop, coffee factory, school, and broom factory (supported by area timber supply).

Meanwhile, a thriving turpentine business, adjacent to the railroad, shipped to the outside capitalistic world. Although Ruskin printed money for exchange within the colony for goods and labor, the certificates were not redeemable for U.S. cash. As the turpentine business grew, the broom factory also began shipping for cash. Mule drawn wagons, filled with wooden broom handles, were a common sight as they snaked their way through the pine flats to Waycross.

All seemed well. The town prospered and grew. Cultural pursuits flourished - including a brass band and literary society. The saws of the lumber mills were seldom still as the build-

ing continued; even the sidewalks of Ruskin were made of wood and continued to extend in all directions. The community's bustling newspaper, The Coming Nation, told of great things to come. The word spread quickly and soon distinguished visitors from all over the world began visiting the colony. Writers, artists, and a host of scholars came with great inspiration to carry on the philosophy formulated by England's John Ruskin.

But trouble lurked in paradise and the days of utopian illusion were numbered.

Although forestry enterprises prospered with other endeavors, problems developed in relation to concepts and morale. Despite claims of socialistic purity, there were those in the colony who began to show symptoms of capitalism; some even insisted on keeping more than an equal share of the money while doing less than an equal share of work. Unequal working hours and job assignments also became points of contention.

When Ruskin management refused to show financial records to dissenters, an accountant was hired to check the records. Two days before the accountant arrived, the commissary burned. Records, food, money and other essentials were destroyed.

Social and economic chaos followed the fire. Morale collapse, financial disintegration, and finally complete dispersement of the colony occurred. Like other socialist colonies of its kind Ruskin could not stand the test of time in America.

Today, the Ruskin commune is footnote in history, but the forest resources so important to it's existence remain a vital part of the area economy. Modern forestry management techniques have established the Waycross area as one of the state's major forestry centers.



Ruskin commissary, above, served as a focal point for activities and storage of goods. Two days before disoriented colonists were to have an accountant check financial records, the commissary burned. Records, food, money and other essentials were destroyed. Chaos followed the fire and the commune was disbanded. In the scene at upper right, the community's naval stores industry is depicted. Barrels are ready for shipment by rail to the outside world. At night, loggers and sawmill workers take a break to pose for a photographer. Pea shelling time is depicted below as women of Ruskin make preparations to feed all inhabitants of the colony in a communal dining hall.



(Photos on this and following page courtesy Georgia Archives)



WOOD ENERGY UNIT IS NOW OPERATIONAL AT VALDOSTA PRISON

A wood energy system installed at the Lowndes-Correctional Institute in Valdosta through the joint efforts of the Georgia Forestry Commission, the Department of Offender Rehabilitation and the Georgia State Financing and Investment Commission, is now operational. It is the fourth prison in the state to convert to wood as a major energy source.

The system was installed by a private contractor, but the chip handling section was modified by Engineer B. O. Jarrett of the State Financing and Investment Commission, with welders from the Macon shop and other employees of the Cook and Lowndes County Units working on the project.

It is estimated that approximately 3,000 tons of wood chips will be required annually to fuel the two 105-horsepower boilers that will provide steam for space heating and hot water for the kitchen, laundry and other uses.

The system has a storage bin that will hold about a two weeks supply of chips. The wood particles are run through a disc screen before storage and a special feature is a "walking floor," hydraulic equipment that pumps chips into a conveyor as they are required.

A wood energy system was installed at the Dodge Correctional Institute in 1984 and at the time, Fred Allen, chief of the Commission's Forest Research Department, said it was believed the facility at Chester was the first prison in modern times in which a wood heating system was included in the architectural plans.

The Commission also has been involved in the installation of wood fired systems at Walker State Prison near LaFayette and a prison at Alto. A large system has been in operation for several years at Central State Hospital in Milledgeville, which also has a prison within the complex.

The Commission has cooperated in the installation of systems in other hospitals and several schools.

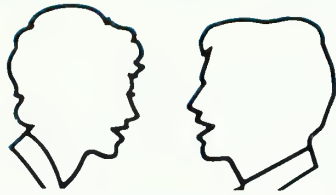


The little settlement of Ruskin depended on the surrounding forests for its existence. Note the large two-and-three story dwellings with wood shingled roofs and picket fences. Wood was used to fuel the steam-powered sawmill and it was the only fuel available for cooking and heating purposes in the town. The office and printing plant for Ruskin's thriving newspaper, The Coming Nation, was constructed with heavy timbers from

Ware County's dense forests. Although sturdy in construction, the socialist doctrines promoted by the newspaper proved fragile in the long run. Like other socialist communes of its time, Ruskin could not withstand the test of time in America. In addition to the newspaper, the press was used to print money for the "Ruskin Commonwealth of Ware County." The certificates were payable in labor or goods, but not in cash.



PEOPLE



In The News

Forester H. L. NEAL retired in January and ended a 32-year career with the Commission in positions that ranged from reforestation assistant in the nurseries to field supervisor, a position he held



NEAL



GREMILLION

since 1984. He also served as assistant district forester in two locations and as district forester in Hinesville and McRae. Neal and his wife, Laura, now live in Hinesville...Forester CHARLES GREMILLION, who has worked with the Commission five years as a project forester in the Newnan District Office, and who recently served as Camilla District Forester, was named field supervisor of Region II to succeed the retiring H. L. Neal. He is a graduate of Louisiana Tech with a degree in forestry. The new supervisor and his wife,



MIXON



MORRIS

and two children will move to Jackson...Commission Director JOHN MIXON was recently presented the State Forest Service National Partnership Award at ceremonies in Washington, D.C. The award, presented by Dale Robertson, chief of the U.S. Forest Service, was for Director Mixon's "efforts to improve and expand forest research and technology transfer in the South."...Forester JERRY MORRIS, who came with the

Commission in 1978 as ranger/forester of the Cobb County Forestry Unit, has been named to head District 20, the Urban Project, Stone Mountain, to succeed Ken Bailey, who was transferred to Athens to head that district office. Morris is a graduate of the School of Forest Resources, University of Georgia. The forester and his wife, the former Miss Carol Deir of Chattanooga, have a daughter, Mandy, and the couple is active in the Church of Christ...Forester KEN BAILEY succeeds the late DON GRINER as head of the Athens District. Bailey came with the Commission in 1968 as a project forester in the DeKalb County Unit, which is now District 20 headquarter-



BAILEY



MARSH

ters. He worked several years in the Dutch Elm Disease project in the Atlanta area and later was involved in utilization programs before assuming the district forester post at Stone Mountain. Bailey and his wife, Connie, have four children and the family is active in the Mt. Zion Baptist Church. They are planning to move to Athens from Snellville...Forester JERRY MARSH, who came with the Commission in 1958 and served as ranger of the Chatham County Unit and assistant district forester of the Milledgeville District prior to becoming management forester in the Statesboro District, recently retired. Marsh said he now plans to form his own business and work as a consultant forester...Forester GREG FINDLEY, who came with the Commission in 1985 as a forester in the Camilla District, and more recently served as head of the Flint River Nursery, has returned to Camilla as district forester. A 1983 graduate of the University of Georgia,

Findley is a member of the Lions Club and is active in several community affairs...Forester RAYMOND (CHUCK) NORVELL, a native of Illinois and a graduate of Western Illinois University, who came with the Commission to work as a patrolman in the Talbot County Unit, has been appointed urban and management forester in the Camilla District. He earned a degree in forestry from the University of Georgia during a leave of absence from the



FINDLEY

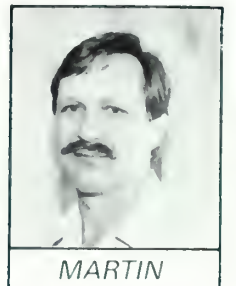


NORVELL

Commission. The forester is married to the former Miss Janice Raborn of Columbus and they have three children...Forester HAROLD WEST has been hired by the Commission and assigned to the ranger position for the Baldwin/Putnam County Unit. A forestry graduate of the University of Tennessee, West was previously employed by the Co-op Hiwassee Land Company in Calhoun, Tennessee. He is a native of Gainesville and a member of the Society of American Foresters. He and his wife, Melinda, reside in Eatonton. They have a three-year-old son...Forester



WEST



MARTIN

DENNIS MARTIN, a native of Marietta and a graduate of the School of Forest Resources, UGA, has transferred from the Washington District to the Management Department at the Macon headquarters to serve as forester specialist. Martin, who came with the Commission in 1974 and served in several capacities before working as reforestation forester in the Washington District, replaces Walker Rivers, who now heads the new stewardship program. The forester and his wife, Corinne have three children.

EARTH DAY

* 1990 *

The first Earth Day was observed in 1970 and now, on the 20th anniversary of that occasion, Earth Day 1990 may be the largest global demonstration in history. More than 100 million people around the world are expected to take part in parades, teach-ins, festivals, and other events that will emphasize, encourage and heighten interest in environmental improvements.

The Georgia Forestry Commission plans to be a part of the Earth Day 1990 observance on Sunday, April 22. Several special events are planned around the state. To learn how you can be a part of this significant celebration, Call your local forestry unit.

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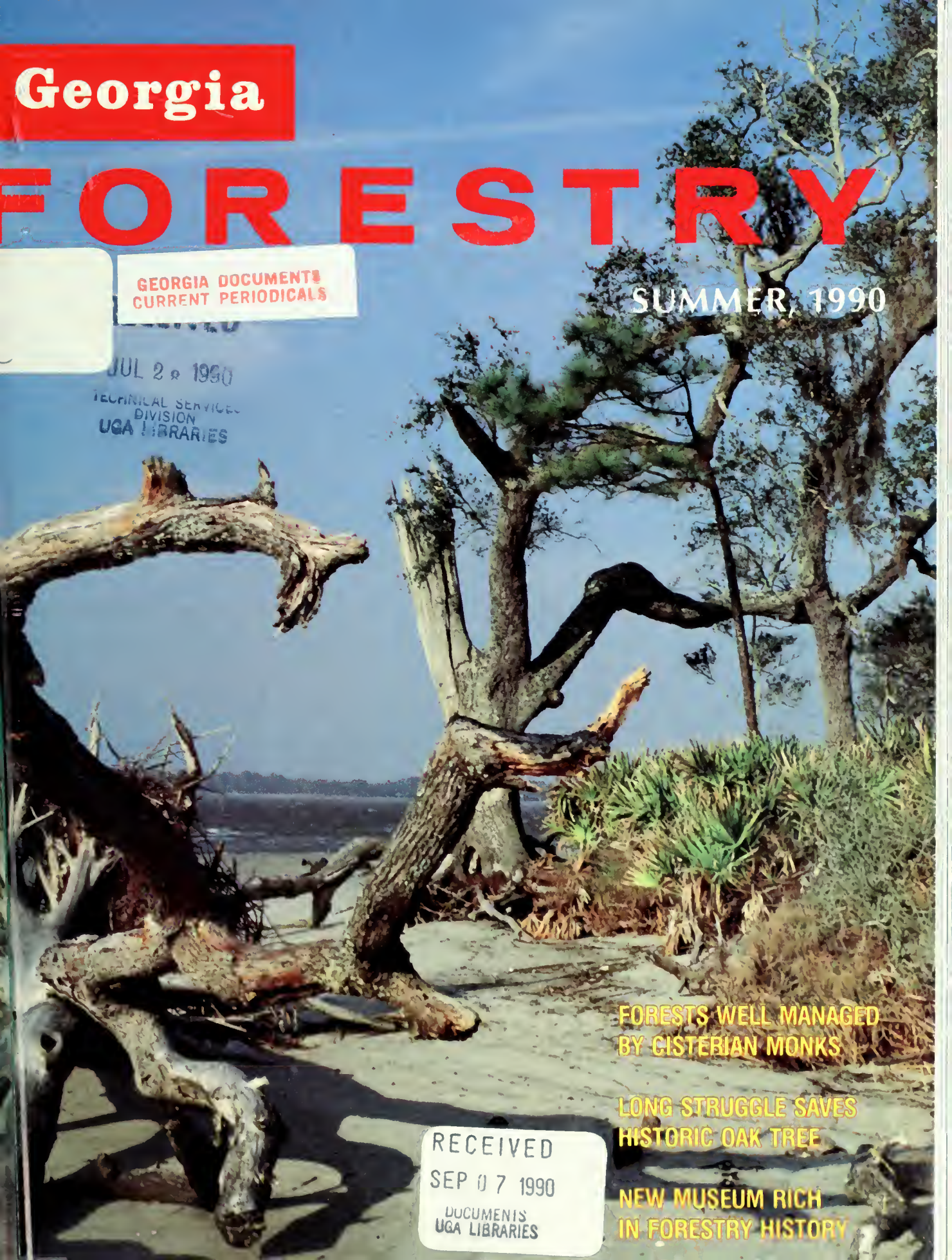
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Georgia

FORESTRY

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This logging truck was caught in an ironic photograph as it passed by this familiar Department of Transportation sign on the right-of-way of interstate 75. However, this trucker is hardly the intended target. The DOT works to stop those who illegally remove trees along the Georgia highways and encourages anyone witnessing an unlawful act to report it.

ON THE COVER - Like bones of an elephant graveyard, dead oaks cover this section of Jekyll Island beach where shifting tides leave them. Dead tree in foreground has a role in nature's scheme as do live counterparts. This dead oak not only offers wind sculptured beauty for beach visitors, but also provides homes for everything from minute organisms to small birds and mammals. In time, decayed remains will return to the soil and sea to nourish nature's future. (Photo By Bill Edwards)

Charles A. (Chuck) Leavell was on tour in Europe with the Rolling Stones when the selection committee visited Twiggs County plantation for a careful inspection of his forest and designated him Georgia's Tree Farmer of the Year.

Leavell, who plays the keyboard with Mick Jagger's famous rock band, didn't have to be home for the committee to learn how well he manages his 1,186 acres of forests; they saw evidence of many excellent forestry practices that prompted one member of the inspection team to declare it "the most beautiful multi-use forest I've seen in years." Our search for the annual Tree Farmer ended.



Charles A. Leavell

Actually, Leavell and his wife, Rose Lane, share the 1990 Tree Farmer honor. Both became certified Tree Farmers after they moved from Macon to the property ten years ago. The place, which they named Charlane Plantation, was already heavily forested, but they set out to enhance their stands by employing a consultant forester to prepare a management plan.



Rose Lane Leavell

The plantation, which includes a network of forest trails, winding roads and a large, picturesque farmhouse built in the late 1980s, is divided into 33 forest stands that range from 4 to 112 acres. Commercial thinning, hardwood control with herbicides, wildlife habitat planting and other practices are carefully carried out. Whenever logs or pulpwood are harvested, they make sure the area is replanted in trees.

The Twiggs County Forestry Unit placed firebreaks around the wooded sections of the plantation shortly after Leavell's wife inherited the land from her grandmother and they moved onto the

TREE FARMER OF YEAR HONOR GOES TO COUPLE IN TWIGGS

property, but the musician-tree farmer now plows the breaks and keeps the trails clear with a farm tractor. He also plants seedlings, performs controlled burning, works with his Christmas trees and frequently adds more feed plots to increase the quail population when time permits.

Leavell, who has been on the road with the Rolling Stones for almost a year, finds little time to come home, but when he is able to return to Charlane plantation and his wife and daughters, Amy, 14, and Ashley, 7, he enjoys working in his trees and planning improvements. Although he has some hired help, he prefers to do the work himself when possible. "Chuck is a very hard worker," his wife said. "I grew up in the country and have always appreciated trees, but forestry was something new

to Chuck and he really works at it."

Leavell said during a recent trip home that tree farming provides a "wonderful balance" in his life. He said he thoroughly enjoys playing with the band before huge audiences in many of the major cities of the world. "It's fun and very rewarding," he added, "but I always enjoy a break so I can come back to the serenity of the Georgia countryside."

Although he had scant knowledge of forestry when the couple moved to the country, Leavell immediately began to read books on the subject, consult foresters and neighboring landowners, take woodland management courses and engage in a lot of hard work. The result: a showcase tree farm, an excellent example of how good forestry practices can transform an ordinary forest into a highly productive, multi-use forest.

EDITOR'S NOTE: We were unable to reach Charles Leavell at his hotel in Hanover, Germany after he was named by the committee, but the following message by Fax transmission was received by his wife and passed on to us for publication.

My wife, Rose Lane, just gave me the wonderful news that we were selected as outstanding Tree Farmers for the State of Georgia. We're both very excited and overwhelmed to receive this most flattering honor. My only regret is that as I am currently on tour with The Rolling Stones in Europe, and will be until mid-August, I'm afraid that I will be unable to attend the convention and therefore not able to accept the award personally. However, Rose Lane will be able to attend and shall be pleased to accept the award for both of us.

We have worked hard on Charlane Plantation since it came to us almost 10 years ago. It has been a labor of love, and this extremely gratifying recognition that you have bestowed upon us will serve as a great encouragement to continue to learn more about the wonderful subject of forestry and to implement the knowledge we gain into improving our woodlands and encouraging other fellow Tree Farmers to do the same.

Thank you again for this honor to represent such an outstanding organization!

*With Gratitude
Chuck Leavell*

The combination of forest management and sewage treatment on an increasing number of Georgia sites is resulting in reduced pollution and accelerated pine growth.

One of the state's larger sites for this relatively new concept is the Covington/Newton County Land Application Facility funded by the city, county and federal government (EPD). The facility totals 830 acres with 550 acres of pine forest. The area is divided into eight sprayfields that are sprayed on a rotating basis with treated waste water. The result has been an unexpected burst of growth in pines 70 to 100 years old - as well as unusually rapid growth in newly planted seedlings.

Before establishment of the land application facility, Covington and Newton County were confronted with the task of upgrading their waste water system beyond standards generally applied in Georgia. The standards involved stricter regulations on quality of treated waste water emptied into the Upper Ocmulgee River Basin (including rivers upstream of Lake Jackson). Research to meet required standards of nitrogen and phosphorous reduction resulted in establishment of the land application project.

David Croom, manager of the facility, said the project was started in 1985. A University of Georgia graduate with a degree in agricultural economics, Croom was employed to manage the project five years ago.

Although in operation for five years, the system is operating at only 70 percent of the design flow

APPLICATION OF SEWAGE ACCELERATES PINE GROWTH

"I Would Not Have Believed Some Of The Results If I Hadn't Seen The Tests ... In Natural Regeneration Areas, Trees Are Growing Like Wildfire."

capacity with potential remaining for expansion. Basically, the system operates by aerobically digesting domestic sludge that is transported to a landfill. Treated water (secondary effluent) that remains was previously emptied into the rivers, lakes, etc. However, under this concept, the water is pumped into an 18-acre holding pond and subsequently sprayed on the 550 acres of pine forests. The holding pond is stocked with gambusia and crappie to control mosquitoes. Gambusia are capable of devouring 150 mosquito larvae per day.

Fifty-four miles of underground pipe stretch from the holding pond through the pine sprayfields. Lateral pipelines are 85 feet apart and spiked with more than 5,000 sprinkler heads placed at 60-foot intervals. A designated sprayfield is sprayed for a maximum 12 hours averaging three million gallons a day, then dried for six days before being sprayed again. A

maximum of 2.25 inches of treated water is sprayed on a field during a one-week period. Regular testing of soil and water has shown no significant changes.

What this translates to in forestry benefits is that approximately 75 to 87 pounds of phosphorous and nitrate are applied annually per acre (respectively). Pines can effectively remove nutrients from the soil in these amounts for 20 years. Hardwoods can remove such nutrients for 40 years.

Since pines require large amounts of nitrogen and phosphorous for growth, the trees offer a double system of benefits. Pines easily absorb the treated waste water and the nutrients stimulate an accelerated growth reaction in the trees.

"I would not have believed some of the results if I hadn't seen the tests," Croom said. He cited one

of the most impressive test results was obtained when a large segment of old growth timber was designated for harvest. However, before cutting was scheduled, Commission Forester Lane Gardner extracted a series of increment bores that revealed 70-year-old trees showing an annual growth rate of 6.8 percent. Other pines, some of which were nearly a century old, showed similar renewed spurts of growth. Various increment bores revealed rings - almost merging before the waste water treatment - were now almost an eighth of an inch apart. Harvest was postponed on this particular site pending further growth studies.

"In natural regeneration areas, it's even more impressive," Croom said. "Trees are growing like wildfire."

Similar results occurred in cultivated areas. When the land application program was established, 70 of the 550 acres of pine timber were harvested and replanted. Later evaluation showed that the growth in the replanted section was also accelerated. The program proved so successful that 250 more acres of timberland have been scheduled for purchase.

Although the facility was not initiated as a money making project, Croom said timber sales and accelerated tree growth will be a positive factor in offsetting operational costs.

Croom, who attends regular seminars concerning developments in this field, said he believes the concept is attracting a lot of interest in Georgia and other states. He pointed out that numerous projects of this sort (ranging from 5 acres to 8,500 acres) have been established in Georgia.

"There's a lot of small facilities around now," Croom said. "These operations are going to be a big help because this is a new technique and there's still a lot to be learned."

Society is becoming increasingly concerned over pollution and appropriate disposal of massive quantities of waste. The tremendous volume of human waste is what makes the problem so difficult in this

type of disposal. Only 150 years ago, sewers were rare. Human waste was channeled through streets and storm drains into the nearest body of water. Even then, such a disposal system caused health problems. Today, it would be a disaster.

However, one thing is for certain. Considering what has already been learned about the land application technique, it is apparently a promising way to rid the environment of this type of waste while simultaneously providing nutrients that will accelerate the growth of pines and hardwoods. Properly managed application of this process could provide important benefits in future forestry management programs.



David Croom, manager of the Covington/Newton County Land Application facility, adjusts sprinkler on system that irrigates 550 acres of pine forests with domestic sewage. Pines absorb nutrients from the treated waste water that produces accelerated tree growth. Increased growth has been measured in pines ranging from seedlings to 100-year-old trees.



Dug Gap Elementary School in Dalton planned a day's worth of activities for the students. Jeb Arp and Mandy Shoates show the "Litter Tree," which illustrates how much trash Georgians generate and how harmful litter is to the environment. The students and teachers at Dug Gap were encouraged to wear their custom-made t-shirts to commemorate Earth Day.

→ EARTH DAY OBSERVED ←

The Commission joined in the worldwide Earth Day celebration in April by emphasizing the benefits of planting and properly caring for trees. At each welcome center in Georgia, respective county units provided free seedlings to visitors and set up displays including information on Global ReLeaf, a project sponsored by the American Forestry Association. The goal of this project is to have planted 100 million trees in the United States by 1992, two million of which will be in Georgia. This project was one of the main projects the Commission promoted during Earth Day.

Several units represented the Commission at local festivals, including the Gainesville Earth Day Fair and the Atlanta Dogwood Festival. In Oconee County, 3,200 pine seedlings were distributed to all middle and lower school students. Smokey the Bear made several appearances across the state, reminding the youth that the earth's forests are to be protected from forest fires and other abuse. Children were included in many Earth Day programs, as they are the future of the earth, and must be educated on how to protect it.

GYPSY MOTH SLOWLY INVADING SOUTHLAND

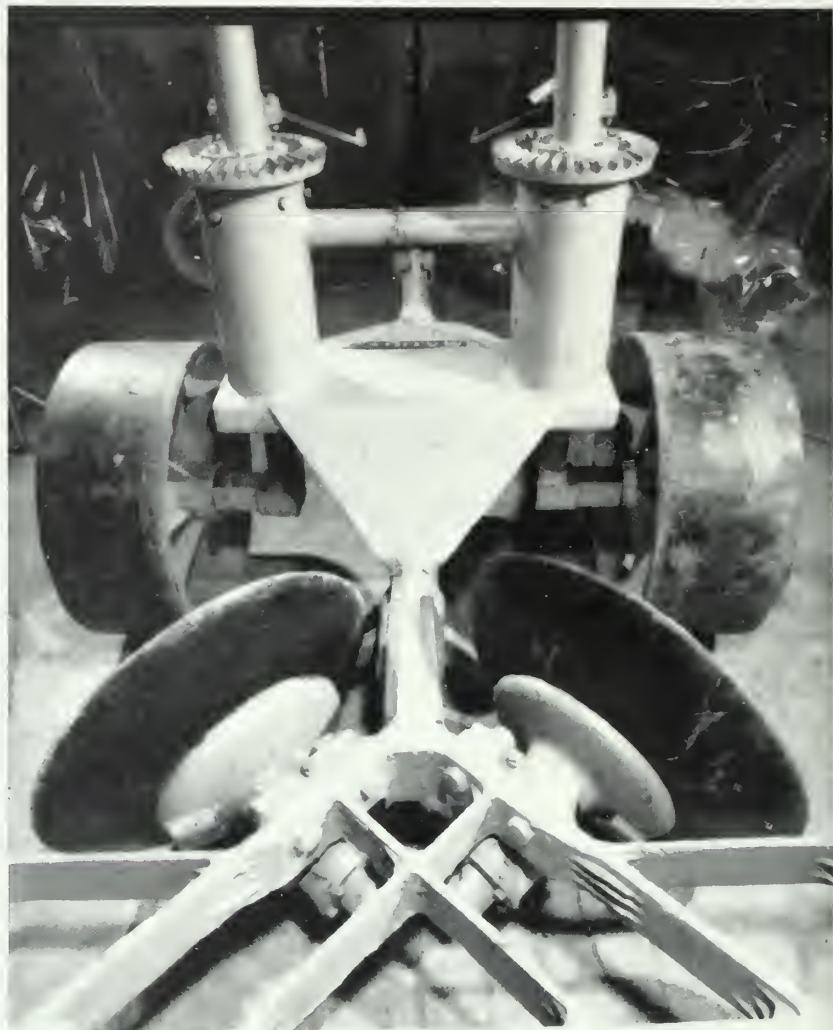
The dreaded Gypsy Moth, a long-time nuisance in many northern states, is gradually moving south, and Terry Price, the Commission's entomologist, is seeking the aid of persons moving into Georgia from that area to help control the insect.

Price said the Commission hopes to contact as many people as possible who have moved to Georgia in the last 12 months from Maine, New Hampshire, Massachusetts, Vermont, Rhode Island, Connecticut, New York, Pennsylvania, New Jersey, Delaware, Maryland, Virginia, West Virginia, Michigan or Washington, D. C. He said the newcomers are urged to call the Commission at the toll-free number 1-800-GA TREES, and will be under no obligation or penalty of law if egg masses are found on their belongings. The entomologist explained that the eggs or moths are often unknowingly brought into the state on vehicles from the northern states.

The Gypsy Moth, once confined to the New England states, has been spreading to the warmer climate Georgia offers, Price said, and for those who enjoy the beauty and shade provided by hardwood trees, this is not good news.

The moths, in the caterpillar stage, are capable of devouring large amounts of foliage on many species of hardwood trees, which will eventually kill the trees if the moths are not eliminated. State and federal officials in Georgia are currently combating the spread of the Gypsy Moth with traps baited with a synthetic sex lure. These traps are good for intercepting hitchhiking male moths, but can do nothing about the egg masses that are continually being transported into Georgia by tourists and new residents. The female Gypsy Moth does not fly and will lay eggs on various outdoor articles such as trailers, cars, boats, firewood, toys and gardening tools.

The moths were introduced to the United States in 1869 by a biologist who was trying to interbreed the Gypsy Moth and the Silkworm Moth. A number of Gypsy Moths escaped from the Massachusetts laboratory and proceeded to propagate in the New England territory.



(Eric Long, Photographer, Smithsonian Institute)

GEORGIA PLOW NOW ON DISPLAY

A unique piece of Georgia Forestry history, in the form of a fire plow, is now on permanent display at the prestigious Smithsonian Institution in Washington, D. C.

The Mathis plow was used for more than 25 years to cut forest fire lanes in South Georgia. It revolutionized forest fire fighting during the great depression and set a new standard and a modification of the plow continues to be used.

The old plow consists of two discs with cast wheels and a mechanical lift. It was the first plow to have a rolling coulter and a middlebuster, and there were only six made of this model.

The plow was originally made for the Superior Pine Products Company in 1933 at a cost of \$525.00. It became the property of the St. Regis Paper Company in 1948 when St. Regis purchased Superior. The company was commissioned to build the plow by William M. Oettmeir, Sr., who managed the Suwannee Forest for the Superior Pine Products Company, from plans provided by the U. S. Forest Service. It was used on the 220,000-acre Suwannee Forest for over 25 years.

The plow was used by St. Regis for fire suppression and prescribed burning, including the big fires of the middle fifties.

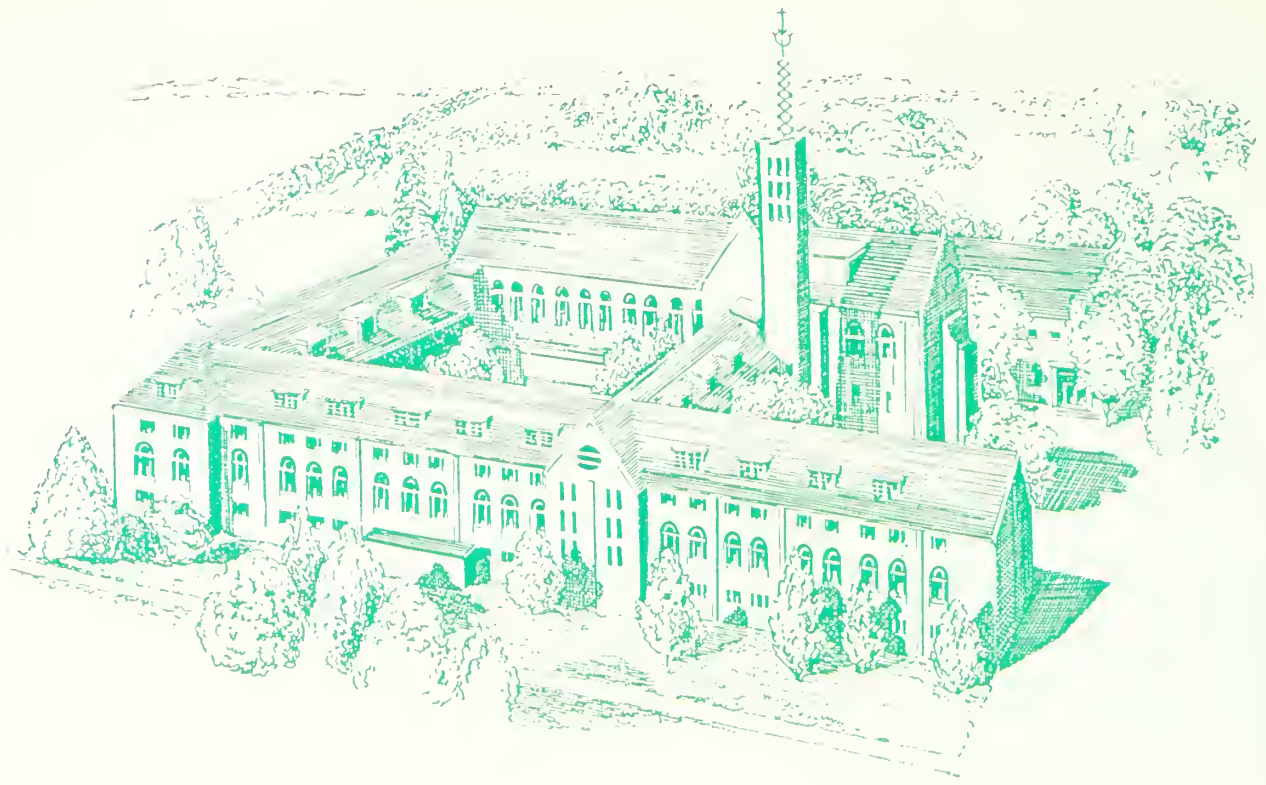
St Regis and Mathis Welding restored the fire plow and donated it to the Smithsonian.



ANNUAL FFA FIELD DAY

It was a repeat performance for the top winning high school in the annual state FFA Forestry Field Day competition held recently at the Georgia Forestry Center in Macon. FFA Chapter of Perry High School (above) took top place just as it did last year and the Pierce County High School's FFA team (below) captured second place at the 1990 competition. Head Football Coach Ray Goff (left) of the University of Georgia addressed the 220 students and their advisors prior to field tests that determined the students' knowledge of forestry. The state finals were sponsored by the Trust Company Bank of Middle Georgia, which presented cash awards.





LIFESTYLE OF CISTERIAN MONKS BLENDS WITH FOREST MANAGEMENT

By Bill Edwards

The Conyers-based monastery of Cisterian monks is founded on concepts of simplicity and isolation from the outside world—a detachment which has not prevented the use of a progressive forestry management program for almost half a century.

This precocious attitude toward forestry could be interpreted as the result of Divine Guidance, good business, common sense - or a blend of all three. Regardless of motivation, results have been positive and financially rewarding.

Father Damian, the 64-year-old monk in charge of maintenance and
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forestry for the monastery, said interest in forest management began shortly after the monastery was established in 1944. Approximately 1,400 of the monastery's 2,000 acres are now in pines. Fifty acres of timber, damaged by a recent tornado, have not put a serious dent in the program.

"We (the monastery) have averaged \$10,000 a year net income from forestry since I took the vows 32 years ago," Father Damian said. "Of course, this is an average of good years and bad years."

Recent proof that forestry is alive and well in the world of monastic economics is a recent 370-acre timber tract sale that totaled \$240,000.

Although times, attitudes and business interests have changed since the monastery was established, benefits of forestry have remained relatively constant - so the monks have stayed with it. The community of some monks has already remained relatively constant, with population peaking in the 1950s at 100 resident monks. Since the monastery is generally self-sufficient, the monks are obliged to pursue only those economic ventures that are profitable. Bottling water from a nearby spring may be the only business.

When the initial 1944 colonists monks founded the community on Benedict's Day, they brought

her Damian, a monk for 32 years at the
nyers based monastery, prepares to
lldoze road through a pine forest.
her Damian is in charge of the forestry
ogram for the monastery which has
00 acres in pines. A recent 370-acre
ber sale totaled \$240,000.

em to Georgia a tradition more than
housand years old. Their values
ere based on the actions of their
atron, St. Benedict, who withdrew
om the excesses of fifth century
oman society to seek God in solitude
n the desert. However, support of
ch traditions in twentieth century
ral Georgia demanded finances, and
number of possibilities came and
ent through the years.

Almost immediately, the monks
esaw the possible long term
nefits of forestry management. They
o set up a dairy, raised pigs,
ckens, beef cattle and rabbits.
ept for a small herd of beef cattle,
ese activities have been phased out
ecause they were too time-consum-
. However, the forest management
ogram was retained.

As dairy farming and other agricul-
tural pursuits were discontinued, pine
s were planted in their place. Also,
ous occupations surfaced to
ace those that had been phased
out. New pursuits involved talents of
the sculptor, sand castor, tailor,
agriculturist and stained glass
designer. A bakery, bookstore and
greenhouse were also developed.

Despite the tendency toward tradi-
tional monastic occupations, the
forest management program remain-
ed progressive and profitable.

Technological advancement and
new interests (such as forestry) may
have contributed to alterations in the
serenity of monastic lifestyle. For
instance, when Father Damian first
came to the monastery, monks lived
under restrictions of silence and com-
municated in sign language. But how
does one discuss subjects such as
computer technology - or even fore-
stry - in sign language?

"Things have changed," said Father
Damian, leaning against a bulldozer.
He has been clearing a road through a
pine thicket, and he recalls when



much of this forested area was ter-
raced farmland. He is not dressed in
the immaculate black and white flow-
ing robes of the monks. He wears
stained green pants, torn yellow tennis
shoes, plaid flannel shirt and tattered
red cap. These are his working clothes.
Hard work is part of the monastic
concept, and Father Damian's clothing
has suffered the accumulated conse-
quences.

Father Damian said there
was not much timber
growing in the area when
he first visited the mon-
astery at the age of 25. A
native of Ohio, he was
then a youthful construction worker,
wondering if there was more to life
than the usual values offered by

**AFTER A HALF - CENTURY,
THERE IS LITTLE DOUBT
WITHIN THE COMMUNITY
THAT THE MONASTIC LIFE-
STYLE AND FORESTRY ARE
COMPATIBLE.**

society. Eight years later, when he took
the vows that included chastity and

obedience, pines were beginning to
grow on sections of abandoned farm-
land; much of this growth was the
result of natural regeneration.

"The original monastery was built
from timber cut here and processed at
the monastery sawmill," Father
Damian pointed out. Later, the
current monastery was built with great
attention to architectural design - an
attention which omitted the intricate
Gothic detail often associated with
such structures.

Architecture promotes a particular
lifestyle, a fact recognized today by
city planners, but realized centuries
ago by monks. Consequently, the
monastery, intended as the threshold
of spiritual vision, has been stripped of
unnecessary distractions - like the lives
of the monks. Contemplative prayer is
the monk's main task, and his physical
environment should be conducive to
objectives. The stark simplicity of the
monastery and serenity of surrounding
pine woodlands suggest such an
atmosphere.

However, in spite of regimentation
and the search for transcendent truth,
there must be interaction with the out-
side world for financial and other
reasons. As maintenance manager and
custodian of forestry pursuits, Father
Damian has interaction with land-
owners and a private consulting firm.
Don Esteve, a consulting forester with
Forest Resources Consultants (Macon)
maintains communication with Father

DEATH CLAIMS THREE RETIRED FORESTER

The Commission mourns the death of three prominent retired foresters whose careers were testimonies to the forestry profession.

Former Rome District Forester Thomas H. Joyner died recently at his Rome residence. He was 70 years old and retired from the Commission in 1985 after serving 22 years.

A Rome native, Joyner joined the U.S. Navy when he was 17 years old and retired as Chief Petty Officer in 1957. He then returned to school and received a B.S.F. degree from the University of Georgia and began working as a forester for Berry College. Shortly thereafter he came to work for the Commission and was a forester for 18 years. He was promoted to District Forester in 1983 and led District One to receive the Outstanding District Award in 1985.

Joyner is survived by his wife, Grayce, two daughters, Tomi Lynn and Debbie, one sister and two grandchildren.

Ollie C. Burtz, former Second District Forester died recently at his home in Gainesville. He was 67.

Burtz began working with the Commission in 1949 as Assistant District Forester in Americus after graduating from the University of Georgia School of Forest Resources. He was quickly promoted to District Forester in Gainesville where he remained until his retirement in 1972.

Burtz put strong emphasis on fire protection during his career with the Commission, and worked hard to protect the counties in his district. In 1969, he led a well-trained crew of West to assist the Forest Service in their fire-fighting efforts.

He is survived by his wife, Mary, two daughters, Marty and Jeannie, two sisters and two grandchildren.

C. Nelson Brightwell, University of Georgia Extension Service forester died recently in Athens. He was director of Forest Research with the Extension Service when he retired in 1971. He began working as an Extension forester in 1953 at the Coastal Experiment Station and transferred to Athens in 1960. He was named director in 1970.

Survivors include his wife, Wanda, three children, Steven, Joseph and Lori, a brother and six grandchildren.



Trappist monks of the Monastery of the Holy Spirit gather for early morning Mass. Some of the monks perform forestry related duties. The monastery, established in 1944, has had some form of forestry management program for almost 50 years.

Damian to do the job.

Father Damian also has frequent contact with Commission Ranger Beryl Budd. Budd's Covington unit has assisted the monastery with numerous forestry related tasks including controlled burns and tree planting. Father Damian said the monastery used to borrow the Commission's tree planter, but eventually bought a planter as their forestry program expanded.

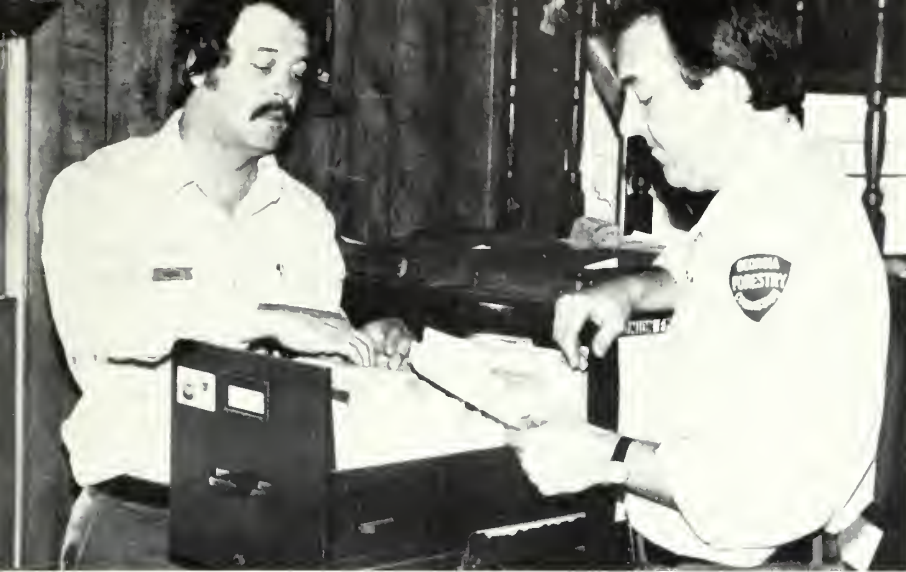
After half a century, there is little doubt within the community that the monastic lifestyle and forestry are compatible. However, the Trappist Cisterian lifestyle of the Conyers monastery is often considered one of the most severe of religious disciplines. A number of the Conyers monastic pioneers, when asked why they chose to be Trappist, replied "because it was the hardest life to be found within the Church." What they referred to included frequent fasting, hard manual labor and total silence (except for communication with one's novice master). In essence, it was a composition of austerity, suffering and self-denial.

Now, however, the monk has

periods of silence for meditative purposes only. One period of strict silence is required in his daily routine, which begins at 3:30 a.m. It is also interesting to note that visitors to the monastery are now persons of diverse faith who come for counseling, prayer groups and to share meals in an area that was once designated a novitiate (training area for men striving for a closer relationship with God). This same space is now used to help non-monastic visitors toward a similar goal.

Although Georgia is only four percent Roman Catholic, the monastery attracts an increasing number of visitors from Atlanta, as well as the entire Southeastern United States. Virtually all visitors reflect the feeling that this is a different place where a unique sense of calm and peace can be experienced.

Thus with all the aspects of the monastery considered, the objective observer could conclude that two factors of monastic life have remained constant - faith in the Lord and forestry management.



UNION-FANNIN-TOWNS FORESTRY UNIT

"The Fannin-Towns-Union Forestry Unit personnel are highly skilled in mountain firefighting and also very effective in such areas as reforestation and conservation. They are always willing to serve outside their unit when help is needed anywhere in the district or across the state.

Forest Ranger Everett Rhodes is a supervisor who knows what to do and he does it! His supervision is reflected in a record of absolutely no turnover in personnel in many, many years.

The mountainous unit - the largest in area in the district - often receives less aid from the district office because of its isolation, but continues to receive a superior efficiency rating for its day-to-day operation."

David McClain
Gainesville District Forester

The logging work of Forest Ranger Everett Rhodes in his native North Georgia mountains and his operation of heavy equipment in an Army engineering company in Korea are experiences he feels have helped him considerably in the supervision of his three-county forestry unit.

The ranger gives greater credit, however, to the dedication and close cooperation of the personnel that give in the unit." Although separate offices are located in Union, Fannin and Towns Counties, Rhodes said "we work as a close-knit team...like a family." He said his eight patrolmen are thoroughly familiar with the wide area that he compasses his unit, and they are "interchangable" when needed away from their home county.

Ranger Rhodes, who maintains the unit's headquarters near Blairsville, said, "All my patrolmen are natives of these

mountains and they have had a lot of experience in fighting fire in rough terrain." He said he recalls only one "really bad experience" during his 17 years with the Commission. That occasion, he explained, was when five of his men were trapped on the side of a mountain by a fast moving fire that abruptly changed directions. They were surrounded by fire and dense smoke when a Commission aircraft pilot spotted a small escape route and radioed directions that perhaps saved their lives.

The ranger, who also attributes the unit's excellent performance record to "our district forester and the field supervisor, two men who always give us excellent support," is well known in Georgia's mountain counties as a country musician and song writer. He said he enjoys "singing and playing the guitar at birthday parties, benefits and on other occasions just for the fun of it."

Forest Ranger Everett Rhodes, left, and Patrolman Mike Payne in photo above check landowner files in the Union County Unit office. At right, Patrolman Rocky Hood keeps an eye out for wildfire from his vantage point at the tower at Brasstown Bald, the highest mountain peak in Georgia.



ANOTHER IN A SERIES
OF STORIES ON OUTSTANDING
COUNTY FORESTRY UNITS

Rhodes is a graduate of Fannin County High School, and he completed courses in mechanics and business administration at the Tri-County Technical School in Peachtree, N. C. He is a member of the Masonic Lodge and an avid deer hunter. The ranger and his wife have four children.

UNION COUNTY

Patrolmen stationed at the unit's Union County office include Gordon Payne, Mike Payne and Ricky Hood.

Patrolman Gordon Payne, a native of Union County, came with the Commission in 1973. He said he has always enjoyed working with the unit and serving the landowners around the county, but he also finds satisfaction during many of his off-duty hours by working for New Union Baptist Church, where he is a deacon. He works in the church cemetery and is currently helping build a fellowship hall.

Payne, a member of the Masonic Lodge, and his wife, Mary, have seven children and 14 grandchildren.

Patrolman Mike Payne, also a native of Union County, came with the Commission in the winter of 1975. He attended North Georgia Vocational School and Haywood Tech in Clyde, N. C. He studied forestry and ornamental horticulture and enjoys growing Bonsai trees as a hobby.

Payne said the greatest improvement he has seen in the Commission during his 15 years of service has been in radio communications. "Now that the tractor on the fire line is in constant contact with other units, the tower, aircraft, etc., we do a much safer, more efficient job," he said.

Payne grows apples and tends a cattle farm. The patrolman and his wife, Barbara, and their two children attend New Union Baptist Church where he is the Sunday

School Superintendent and a member of the building committee.

Patrolman Hood maintains the forestry lookout tower at Brasstown Bald, the highest mountain peak in Georgia. He said he finds the work at 4,784 feet above sea level interesting and prefers winter to summer months. "In summer," he said, "I think of everybody out there enjoying planting, doing yard work or enjoying recreation while I'm confined to the tower."

In the past couple of years, however, Hood has been catching up on off-duty pursuits. He is building a rustic home with the help of his wife, Hilda, "my three children and anybody else who wants to pitch in," he said. The lumber and shingles are made from trees he has cut from his own land.

Hood served in the Army in Korea and studied mechanics, business administration and radio and television repair at the Tri-County Technical School. The family is active in New Union Baptist Church.

FANNIN COUNTY

The Fannin County office of the tri-county unit is manned by Patrolmen David Long, Ronald DeWeese, and Charles Dillingham, and they have something in common: each had good, responsible employment in Atlanta, but they moved back to their native mountain to live the country life.

Patrolman Long, a native of Fannin County who came with the Commission in 1974, worked ten years for the Ford Motor Company in Atlanta before heading back to the hills of home. He is a licensed barber and learned welding at a trade school.

Long remembers one harrowing experience that came about just two weeks after he started work with the unit. Someone set a back fire too close to the area



was plowing and he almost became trapped in some
st spreading flames. Since that incident, however, he
id firefighting and other duties have been "just
outine."

The patrolman and his wife, Doris, have five children.
they live and work on a 100-acre poultry and truck farm
and the family attends Union Hill Baptist Church.

Patrolman DeWeese worked in an Atlanta machine
shop before returning to Blue Ridge to work with his
brother in operating a service station. He came with the
Commission in the fall of 1976. He attended Young
arris College and picked up his mechanic skills at
eKalb County Technical School.

The patrolman and his wife, Judy, and their daughter
e members of the Sweetgum Baptist Church, where
e is treasurer and a deacon.

DeWeese is an expert in maneuvering a tractor up and
own mountain slopes in fighting forest fire, but he also
enjoys returning to the woods as a bird hunter during
ome of his free time.

Patrolman Dillingham was born in Canada, but the
family moved to the North Georgia area during his

infancy. After graduation from high school he moved to
Atlanta to work for several years with a major paper
supply company as an assistant manager and trainer,
but eventually returned to the mountains. He came
with the Commission in 1977.

The patrolman and his wife, Carol, and their two
children live on a country place that is mostly in forests.
The family is active in Hemptown Baptist Church.

Dillingham said fire has run him "off of the mountain
a few times" but he has had no serious problems in his
13 years of fire fighting.

TOWNS COUNTY

Patrolmen E. J. Garrett and Jack Moss are stationed at
the unit's Towns County office in Hiawassee.

Garrett, a native of Towns County, came with the
Commission in 1967. He studied auto repair at North
Georgia Trade School and finds that the training comes
in handy in helping keep the unit's equipment in top
shape.

The patrolman served in the Army in Germany and is
a member of the local chapter of Veterans of Foreign
Wars. Garrett and his wife, Charlotte, have two daugh-
ters. The family attend the Bellsceen Baptist Church.

Patrolman Moss, also a native of Towns County,
studied brick masonry and radio/television repair before
coming with the Commission in 1967. Ranger Rhodes
said "Jack and E. J. make a good, effective team in fire
fighting and otherwise serving the landowners," but
when vacation time rolls around, Moss is off to
Colorado to hunt for elk with bow and arrow.

The archery expert, who also enjoys target practice,
has bagged an elk each year for the past four seasons.

Patrolman Moss and his wife, Arbena, live on an 85-
acre cattle farm. They attend Bellsceen Baptist Church,
where he is a deacon. They have two sons.

Patrolmen in photos, left to right: David Long swings
paint brush to keep the Fannin County office neat
appearance; Charles Dillingham restocks the office
temperature rack; Jack Moss boards his truck to respond
to a fire call; Ronald DeWeese receives a call for
downer assistance; E. J. Garrett runs up the flag
at the Towns County office; Gordon Payne makes
the equipment at the Union County headquarters is
ready for the next forest fire.



LANDMARK OAK PROTECTED BY HEPHZIBAH RESIDENTS

By Mollie Batts

For 200 years the massive Southern Red Oak has grown by the roadside, from a determined little seedling to a downright indomitable oak tree. Its shade has provided relief to cotton pickers of the Old South, to south-bound vacationers of the 20th century, and even to former President Franklin Roosevelt himself. With the help of local citizens, the tree has survived, despite repeated antagonism that has threatened to transform this flawless scene of beauty into a slab of steaming black asphalt.

The latest defender of the tree is 77-year-old Lottie McGee, who has lived in Hephzibah since the day she was born, and can remember the tree almost that long; when the surrounding countryside, now homes and businesses, was all cotton fields.

"They used to bring the cotton up here and see where there used to be a branch right there?" She motions toward a 10-inch diameter stub, with weather-beaten and arthritically curled

edges, that protrudes from the great trunk. They used to hang the scales from that branch and weigh the cotton when it came up from the fields...that branch has been long gone."

Around the base of the tree are positioned three concrete picnic tables and benches, placed there in 1963 by the now defunct Hephzibah

Garden Club. The club began meeting there for gatherings and picnics, planted flowers and kept the area appealing and comfortable.

When the Garden Club disbanded, former member Postmistress Alva Lindsey made it her personal duty to continue caring for the park. She died in 1969, and for a while the park went unmanaged. A few years later, Lottie McGee, then vice-president of the

to prepare the dedication. The event was planned and executed, and a sizable crowd that gathered there included three county commissioners and three city councilmen.

A car carefully pulls up to the picnic table, and two young women get out with a collection of containers and bags. While one arranges the food on the table, the other slowly scans the area; the wind gently tugs at her t-shirt. They both commence to eat.

"That's fine!" McGee exclaims. "It just thins me when I see somebody using the park. With a grin across her face, she sighs. "I think that's great."



Crusader Lottie McGee and mighty oak she helped save.

Hephzibah Homemakers Club, called upon the rest of the group to take over the job of park upkeep, and plan to dedicate the park to the memory and devotion of Alva T. Lindsey. Marion Purkey was president of the Homemakers Club, and she and the rest of the group enthusiastically agreed to the idea, and worked hard

McGee says the park was so well used that the soil began to erode away from the roots, exposing them to the open air. As the problem worsened, she appealed to the State Department of Transportation to bring some dirt to cover the roots. After persistent pleading, the DOT finally delivered loads of dirt to the base of the tree, covered the roots and revitalized the aging landmark.

In 1987, when Jim Williams began building his hardware store a 100 yards from the tree, the DOT told him his store would require deceleration and acceleration lanes to moderate traffic congestion. Mr

Purkey knew these lanes would jeopardize the tree's health, and spent a great deal of time with Williamson and the DOT modifying the plans. Purkey was also distraught with Williamson's plans to pave a parking lot, but Commission foresters assured her the lot was too far away to do any damage.

Today the Richmond County Department of Parks and Recreation has taken responsibility for the tree and periodically cleans the area and empties the trash cans they have provided for visitors.

About two years ago, the Department of Transportation determined that State Highway 88 was carrying too much traffic and needed to be widened. The widening of that road, according to original plans, meant the fate for the old tree. Lottie McGee had no long a relationship with the tree to allow the DOT to yell "timber!" while she was still alive.

When the DOT announcement was made, McGee organized a movement either to stop the project altogether or to persuade the DOT to alter the plans enough to miss the tree. She recruited some hard workers and drew up a petition that she distributed to area businesses and carried with her wherever she went. She garnered support from Jim Williamson and his Hephzibah Hardware, Ft. Gordon and Racewood State School and Hospital. Dedicated allies got the tree media attention, which opened the doors to more support and, ultimately, more signatures on the growing petition.

DOT pre-construction engineer Charles Lewis explained that the project included the widening of State Highway 88 by three lanes between county road 65 (Windsor Springs Road) and State Route 121 (U.S. 25), which is a section of road a little over two miles long.

Lewis said DOT projects take about 25 years to plan, which includes negotiating with officials and citizens over rights-of-way and community interests. As part of the plan, the DOT holds a public hearing to solicit comments from the community concerning the project. "Depending on the comments, we try to adjust the project according to public desires," he said.

On July 24, 1989, the public hearing was held in the Hephzibah Recreation Center, and over 75 people



The spreading oak dominates the landscape on this stretch of State Route 88 near Hephzibah.

showed up to express their opinions and find out more about the issue.

DOT spokesman Jerry Stargell said working with the public about a proposed project is a routine event, and the fact that many wanted to save the tree was no surprise. "It's not unusual for us to try to make adjustments if at all possible," he said. "If a change can be made to save a significant tree, throughout my 21 years here we have made it." Stargell added that there are some cases when the tree cannot be saved, but that the DOT's first and foremost responsibility is to provide safe and efficient roads, even if it means losing a tree.

Ronnie Hadden, his brother David and their mother Lois own and manage "Mama's Kitchen," a home-style restaurant that's been serving up large helpings of southern food to the people of Hephzibah for the past two years. The Haddens gave their support to save the tree, which is located outside their storefront. "I didn't want to see them cut it down," Ronnie said. "I go hunting a lot and I've seen a number of giant white oak trees fall and it makes me sick."

WGUS, a country radio station out of Augusta, heard about the plight of the Hephzibah Oak and decided to do a live broadcast from under the tree on St. Patrick's Day, 1989. The four-hour

broadcast was hosted by DJ Ron Jones, who dressed as a leprechaun and stopped people on their way to work, petition in hand. Mama's Kitchen provided coffee and pastries while Hephzibah Hardware gave door prizes. McGee said there were "two long lines of cars waiting to sign the petition," and over 200 signatures were collected that morning alone. People in Augusta (12 miles away) heard the broadcast and came out to show their support.

McGee delivered copies of the petition, which contained almost 2,300 names, to seven public officials, and hoped she had done enough. About two months later she received a letter from DOT Commissioner Hal Rives: the tree was to be saved. The letter stated that the changes made in the plans involved shifting the road slightly to the north of the park, which put the tree out of the bulldozer's path. The letter also stated, however, that the road would still come six feet closer to the tree.

In response to this news, Sixth District Forester Cathy Black wrote a letter to the DOT recommending that a professional arborist be hired to care for the oak throughout the construction period, as construction damage could easily kill the tree. Black said she did not get a reply, and does not know whether or not the DOT will take her advice.

(continued on pg. 22)

A Gift Of Trees

More Than 8,000 Acres Of Timberland Properties Given Or Bequeathed To UGA Foundation During Past Two Years

By Howard Bennett



The University of Georgia Foundation is receiving a gift of 1,000 acres of Grady County pine and hardwood forests from a civil engineer who quit his profession to become one of the state's most enthusiastic tree farmers and conservationists.

Charles W. Terrell contends that "tree farming just can't be done in one lifetime" and said, "There are individuals I trust and could leave my land to after I'm gone, but their possession would be short-termed, too." He said the university will bridge generations and perpetuate good management of his forests.

Legal arrangements are being made for Terrell to donate the property to the University of Georgia Foundation for the benefit of the School of Forest Resources. The 73-year-old landowner will remain on the property as a tenant for the remainder of his life while continuing to manage the woodlands.

"I was 40 years old," said the graduate of the Massachusetts Institute of Technology, "when I realized what trees were all about and now you might say that forestry is almost a religion with me." His reverence for the woodlands became apparent to three visitors to his property recently as they were led through stands of mature pines, across broad fields of planted seedlings, and along streams that nurture baywood, wild cherry and oak.

Terrell, who lives alone since his wife, Margaret, died ten years ago, has a modest brick home at the end of a long, winding woods trail off State Highway 112 a few miles north of Cairo. Surrounded by forests, he enjoys the company of four dogs

and the wild animals that roam his land. He was born in Alabama, but early in childhood his father's work in construction took the family to the New England States.

Terrell served in the Navy, earned a degree from MIT and returned to the South to work as an engineer on the construction of the Jim Woodruff Dam in Seminole County. "The dam site is where I learned a bitter lesson

valuable timber, camping sites, hiking trails and wildlife habitat was being lost to water skiing." His awakening to the multi-value of the woodlands prompted him to begin buying land in South Georgia.

Terrell and his wife bought the place he now manages at a price "much less than we would have had to pay for land up in New England where we had previously lived." He said much of the land they purchased "at a good bargain" had been severely abused for several generations by careless logging and farming practices, and they set about immediately to reclaim the erosion-scarred fields and neglected woodlots. The couple started planting seedlings at the outset and now, after 30 years of reforestation, Terrell estimates he will soon plant his millionth pine.

Forester Wayne Worsham of the Commission's Camilla District said Terrell is "self taught in forestry" and to a great extent does his own forest management. "He often calls me for assistance and sometimes he is asking advice on something I've never thought of before and that's when I have to go back to the books for an answer."

Terrell said he tries to imagine what the property was like years ago. "Now, that big oak over there was probably spared because the logger couldn't get their logging cart across this gully," he explains to visitors trailing him through the woods. "That's all that saved it." He showed several other prime specimens that somehow escaped the crosscut saw and axe of another generation.

"When we first took possession of

"Within the past two years, two other timberland properties totaling more than 7,000 acres have been bequeathed or given to the University of Georgia Foundation for the benefit of the School of Forest Resources. These properties will be managed in perpetuity for the support of the university's mission of teaching research and public service."

"Timberland owners who may be interested in a discussion on having the School of Forest Resources manage their lands in perpetuity for the benefit of forestry research and education should contact the dean of the School of Forest Resources."

W. N. Haynes
Adjutant Professor and
Consultant to the University
of Georgia Foundation

concerning forestry," he said. "It's where I began to appreciate trees in a new way." The merchantable timber surrounding the dam site had been harvested, but Terrell said that when he realized that 36,000 acres would be flooded to form a lake "it did something to me." He said "A potential forest that would provide



At left, landowner Charles Terrell and Ranger Elaine Jones study land plat. Below, Terrell proudly shows prized pine to Foresters Wayne Worsham, left, and Michael Ryfun.

Ranger Elaine Jones of the Grady County Forestry Unit works closely with Terrell and considers the landowner "a very unique individual and I wish we had more just like him!" The ranger has walked many miles with him across his woodlands in planning control burns and other management practices. She has taken 4-H students into Terrell's woods "to show them an ideal forest."

The landowner said he always receives excellent cooperation from Ranger Jones and foresters in the Camilla District office and never hesitates to "lean on them" when he needs assistance or advice.

Terrell's many interests include opera, but he is just as content to be

(continued on pg. 19)

"at this place," the landowner said, "I had a bulldozer working here and you should have seen the big heart pine stumps that were unearthed. I just wish I could have seen the beautiful, dense forest that once grew on this location."

Forester Worsham admits that Terrell leans more to the aesthetics of the forest than do most landowners, but said "I understand his reasoning. He is a good steward of the land, a very devoted environmentalist who wants to leave the land in much better condition than it was in when he came to Grady County."

Terrell has healed most of the wounds inflicted by previous owners with an extensive tree planting schedule, but the reforestation is not confined to pine. Plots of planted river birch, rows of cedars and scattered dogwood are found on the property. Ornamental trees and flowering shrubs line the woods trail that leads to his home. Cypress has been planted on the rim of five clear water ponds, but that planting project has resulted in a continuous battle with beavers intent on chewing down many of the young trees. The problem is somewhat painful to Terrell, as he is an active member of the Humane Society and is opposed to killing any wild animal; he doesn't

allow any type of game hunting on his land. The conservationist was forced to draw the line, however, when it came to the destructive beavers. He hired a trapper to reduce their population.





Miss Georgia Forestry, Kathryn Leigh May, flanked by David Westmoreland, left, Assistant to the Director, and John Mixon, Commission Director, cut the ribbon to officially open the new museum. It was one of Miss May's last duties before passing the crown on to the 1990 Miss Georgia Forestry.

INTERESTING HISTORY OF FORESTRY IN GEORGIA TOLD AT NEW MUSEUM

The history of forestry in Georgia is now told in displays, photographs and artifacts in a rustic five-room log structure on the grounds of the Georgia Forestry Center in Macon.

The Georgia Forestry Museum, a project in the planning stage for the past seven years and built in recent months, was officially opened recently when Miss Georgia Forestry, Kathryn Leigh May of Tennille, cut the ribbon during dedication ceremonies.

Commission Director John Mixon said many companies and individuals were generous in providing some of the materials necessary for completion of the attractive building. "We are also grateful to those who donated historic items that are now preserved and permanently displayed in an interesting setting," Mixon said.

The museum was built with pine logs from trees grown in the Commission's Baldwin Forest. AAA Log Homes, Inc. in Rayle processed the logs and assigned a local representative to help initiate the construction. At that point, Commission personnel took over, and the museum gradually became reality.

Originally, an old log cabin office in Albany was slated to be moved to Macon and serve as the museum, but early attempts to move the structure, built in 1933, revealed that it was too

dilapidated to be moved. The original floor joists were salvaged and used in the new museum, which now resembles the old log building in floor plan and certain architectural features.

Except for the foundation, the



Many of the items in the Georgia Forestry Museum and adjacent display shed were generously donated. Three items in the display shed - a Fordson tractor, manufactured in 1922, a pick-up truck and a gasoline engine - were donated by the Barker family: T. A. Barker, Jr. (left) of Forest Park and Yatesville, J. B. Barker (right) of Ft. Myers, FL and Columbus, and Frances Barker Vernon (not pictured) of Wadesboro, NC. The items were donated in honor of T. A. Barker, Sr. and Kate Blasingame Barker.

museum is built completely of wood, including pine floors and wooden ceiling tiles. The building's wooden roof shingles are made of treated southern yellow pine instead of the traditional cedar to utilize materials derived from Georgia forests.

Historic material gathered from many sources tells the story of forestry in Georgia and explains the role the Commission has played and continues to play in forest protection, management, reforestation, education and research. Outside the museum, a display shed houses forest equipment including fire plows, tractors, planters, saws and other forestry-related machinery used in the past.

All construction on the museum was provided by Commission personnel under the direction of David Westmoreland, assistant to the director. Those who provided carpentry, masonry, painting, roofing, electrical wiring and other skills were honored at the dedication, as were representatives from companies that donated materials to the project.

The companies included AAA Log Homes; Tolleson Lumber Company, Perry; Georgia Pacific Corp., Atlanta; Langdale Forest Products, Valdosta; Vining Stone Company, Griffin; U. S. Borax and Chemical Corp., Atlanta; and Georgia Power Company, Macon.

A Gift Of Trees

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leep in the woods marking timber with blue paint as he would be attending the Met. When he returns to Cambridge for the class reunions, old classmates from as far away as California have gotten the word that he is a tree farmer, and he said he is proud of this distinction.

The landowner said he is having a Cairo attorney prepare the deed to turn the land over to the university; the document will specify that paved roads are never to be built on the property. He at first specified that no buildings were to be constructed in an effort to preserve the pristine state of his woods, but he said he later changed his mind. "Georgia is growing in population," he said, "and I believe that one day the University of Georgia may be like the University of California and locate divisions in other areas of the state. Terrell said he realizes that educational buildings may be necessary if a school is ever established on the property he is giving to the university.

Whether the university eventually divides a small portion of the property as building sites or leaves the entire estate intact, future students of the School of Forest Resources will find the Charles Terrell Memorial Tree Farm in the far reaches of South Georgia to be a beautiful, lush laboratory in which to further their education.

DR. POWERS RECEIVES HIGHEST USDA AWARD

Dr. Harry Powers, Jr., plant pathologist with the Southeastern Forest Experiment Station, has received the highest award that can be achieved from the U.S. Department of Agriculture.

Powers, who has benefited the Commission with his research in uniform rust and in other areas, was presented the award in the superior category in recognition of his work in fungal tree diseases.

Station Director J. Lamar Beasley said, "We are proud of Harry Powers here at the Station, and we are delighted that the Department of Agriculture has recognized his many accomplishments. Harry has had a long and distinguished career..."



Forester shows handsome trophy presented by federation.

DOLLIVER EDUCATOR OF THE YEAR

The Georgia Wildlife Federation has named Forester Sharon Dolliver, coordinator of the Commission's Urban Forestry Program, Conservation Educator of the Year for her many efforts to teach the public about the need to conserve natural resources through expert forest management.

The award was presented to Dolliver by Lt. Governor Zell Miller. As a forester, Dolliver works with Georgia cities and communities to encourage appropriate management of urban trees. She also works with the state educational system to promote utilization of Project Learning Tree. Her work with the Georgia Urban Forest Council includes coordinating publicity of Global ReLeaf (a project aimed at cooling the earth through planting trees) in Georgia.

The growing number of Tree City USA communities in Georgia reflects Dolliver's devotion to spreading the word about urban forest management. Five years ago, Columbus was the only Tree City USA in Georgia. As of last February, 25 cities have gained Tree City USA status.

Dolliver has had significant influence on the public through Project Learning Tree, which illustrates the interdependence of all components of a forest. She is a state coordinator of the program along with Laura

Newbern, Georgia Forestry Association, and Rusty Garrison, Cooperative Extension Service. The PLT system, which has trained over 1,500 educators in Georgia, is tailored to work with QBE. Classroom assignments from Project Learning Tree use the forest as a window into the natural world to investigate wildlife habitats, and in 1989 won the Outstanding New Program in the Nation award. Dolliver helped tremendously by creating a brochure and video to inform educators about the program and by coordinating teacher workshops.

Dolliver's experience in PLT helped her create the curriculum for the Commission's Forestry Youth Camp. She designed the curriculum to expose the future leaders of Georgia to all facets of forestry. The Project Wild session teaches the students the basic requirements for supporting wildlife population in a forest.

As a charter member of the Georgia Urban Forest Council, Dolliver has created a forum for educating professionals about the unique needs of urban forests. She has worked as Secretary of the Council since its inception, produced the quarterly newsletter Georgia Tree Talks, and coordinated the first awards conference last November.



Carrie Harvey
Bremen Co.



Lora Johnson
Bacon Co.



Ledra Davis
Barrow Co.



Linda Gillis
Brantley Co.



Amanda McEachern
Ben Hill/Irwin Co.



Cindy Heath
Butts Co.



Janet L. Kitcher
Burke Co.



Lori A. Lucas
Bleckley Co.



Chi Lynn Ward
Coweta Co.



Tamara Grooms
Charlton Co.



Amy Hunt
Crawford Co.



Kathy Bennett
Clinch Co.



Lara A. Williams
Crisp/Dooly



Julia S. Haym
Clark/Ocone



Amanda K. Henson
Dawson Co.



Amy McCord
Decatur Co.



Tammy L. Smith
Dodge Co.



Linda Bush
Early Co.



Brandi Canady
Emanuel Co.



Shannon Lord
Greene Co.



Diane Winn
Gilmer Co.



April Chalker
Glascok/Jefferson



Deanna Harper
Glynn Co.



Ginger McKee
Henry Co.



Sadeanya A. Waters
Jenkins Co.



Sheila Justice
Lincoln Co.



Amanda Seago
Lanier/Lowndes



Lisa C. Boy
Lamar/Pike/Spalding



Meloni Belk
Madison Co.



Julie Bryant
Meriwether Co.



Kristal A. Huff
Morgan/Walton



Sonia Stafford
Miller Co.



Kimberly Peterson
Macon Co.



Joy Daly
Richmond Co.



Mary Donale
Tift Co.



Holly Henson
Trenton Co.



Kristi Parker
Taylor Co.



Brandy Higginbotham
Telfair Co.



Lisa Wessinger
Toombs Co.



Anne Bates
Ware Co.



Kelly Sanders
Washington Co.



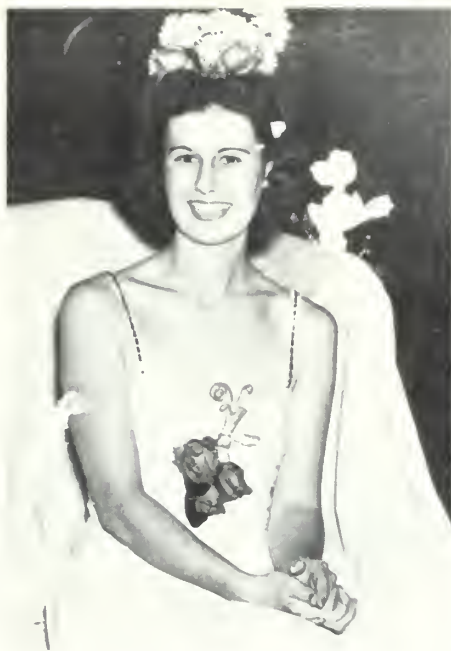
Heather Clark
Wheeler Co.

She was Judy Weston, considered the prettiest girl in Abbeville, when the local Lions Club insisted that the reluctant teenager represent her hometown and Wilcox County in the first annual Miss Georgia Forestry pageant.

That was fifty years ago. She competed against 21 other attractive and talented young ladies and won. Today, she looks back on that contest as a very special event in her life. Now married to Robert Hicks of Cordele and the mother of two children, she said "after it was all over, I was certainly glad I entered...it was exciting and I had a wonderful time."

A half-century later, the 1990 Miss Georgia Forestry, Anne Bates, agrees that the pageant is still a "wonderful time."

The 18-year-old graduate of Ware County High School in Waycross said she felt very honored to be chosen Miss Georgia Forestry 1990 from "so



**JUDY WESTON
WILCOX COUNTY
1940**



**ANNE BATES
WARE COUNTY
1990**



MISS GEORGIA FORESTRY PAGEANT

ny beautiful and intelligent girls." She plans to continue her job at the Ann Dixie in her home town through summer and then start school at the University of Georgia. Her major is relative finance, but she says she is sure of what she wants to do after graduation.

The new Miss Georgia Forestry was chosen from a field of 48 contestants who won pageants on the county level. (Shown on the opposite page are those whose photographs were available at press time). Miss Gum Spirits of the engine was also selected at the pageant and is featured on Page 23.

Bates said she has lived in Waycross all her life, and enjoys traveling to other places. Two summers ago she

toured Europe for three weeks, visiting Switzerland, Germany, France, Italy and England.

Her parents are Dr. Roger Bates and Ms. Gloria Bates.

The new Miss Georgia Forestry entered the Ware County Forestry Pageant last year and was third runner-up. She returned to the pageant in early spring of this year to become Miss Ware County Forestry. She said the Ware County Pageant is similar to the Jekyll Island Pageant, both of which include an interview and a banquet. She commented that the interview process was a highlight of both pageants because it gave her a chance to get to know the judges. She said she also enjoyed meeting the

other 47 contestants and made friends with several girls who are also going to UGA.

Amy Kathleen McCord of Decatur County was named Miss Congeniality. Runners-up to Miss Georgia Forestry are: third runner-up, Lara Amelia Williams of Crisp/Dooly County; second runner-up, Lara Kristin Stanford of Liberty County, and first runner-up Amanda McEachern of Ben Hill/Irwin County.

Bates was crowned by Kathryn Leigh May of Tennille, the retiring 1989 Miss Georgia Forestry. The annual pageant is sponsored by the Georgia Forestry Association, with publicity and other support provided by the Forestry Commission.

Georgia Forestry/Summer 1990/21



Two Soviet Georgia foresters surprised Personnel Director Randall Perry (left) with 20 pounds of Soviet Georgia tree seed. Lado Varbosanidze and George Gotua came to the United States not to sow seeds of discontent, but to plant healthy friendships in American soil. They were just two of about 250 Soviets who participated in the two-week Georgia to Georgia Friendship Force exchange program in the attempt to bridge the cultural gap between Soviets and Americans.



Students in the Harris County High School Chapter, Future Farmers of America, in cooperation with the Georgia Forestry Commission, planted over 50,000 improved loblolly pine seedlings in the Harris County area on unused privately owned land.

The forestry class carries out a forest management plan on a selected area in the 50-acre vocational agriculture forestry plot each year. The students measure and then harvest the timber on the area. It is then cleared and replanted with improved loblolly pine seedlings and a ground cover to control erosion and provide a habitat for wildlife. Turner said the students are learning skills and abilities to be used for a career in forestry or to be of benefit as a private landowner.

(continued from pg. 15)

Hadden said he felt the DOT had been willing to make changes and consider all of the options, and had not left a bad taste in the mouths of Hephzibah residents. He also said that a lot of people, who were interested in selling their street-front property to the DOT, couldn't have cared less about the tree.

Construction is scheduled to begin in the spring or summer of fiscal year 1992, and McGee is still concerned for the tree's health because the road being six feet closer, may harm the root system. If that happens, the tree could die after all. "That would break my heart," McGee said.

McGee believes that what most impressed her about the whole incident was the public response. The 2,268 final signatures included some from Tennessee, Florida, Alabama, North Carolina, South Carolina and West Virginia; people who passed the tree on trips and had come to look for it.

Last November at the Georgia Urban Forestry Conference, Lott McGee was named Tree Steward for her efforts to save the ancient oak.

"I know we worked hard, and I know I've been called a fool, but every time I pass the tree I get the best feeling," McGee asserted. "It was all worth it."

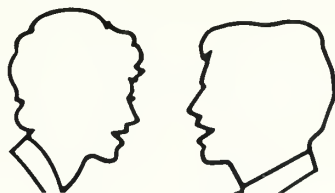
AFC SOUTHERN REGION NAMES KNIGHT MANAGER

Delos L. Knight has been named southern regional manager for the American Forest Council (AFC), it was announced by Laurence Wiseman, AFC president. Knight will be based in Atlanta.

"The South continues to grow in importance as a major producer of timber and forest products," Wiseman said. "Delos Knight's extensive knowledge of forestry and experience as a communicator will strengthen the American Forest Council's program throughout the region."

The American Forest Council is an association of forest products companies who promote healthy, productive forests and help the American public appreciate the value of forests in their lives and economy.

PEOPLE



In The News

Forester KEITH SANDERS, a native of Columbus and graduate of Auburn University with a degree in forest management, has been assigned to the Washington District and will be

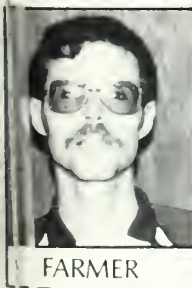


SANDERS



BATES

stationed in the McDuffie County Unit. Sanders was previously employed as a forester for F&W Forestry in Albany and served as a staff forester for A.F.C. Alabama. He and his wife, Angela Sue, live in Thomson...Forester CHIP BATES has been hired by the Commission and assigned to the Statesboro District. A native of Selma, Alabama, Bates graduated from Auburn University with a degree in forest management. A member of Pittman Park Methodist Church, he has served nine years in the U.S. Army Reserves. He resides in Statesboro and is a member of the Savannah Forestry Club...Forester ROBERT FARMER, a native of Ohio, has assumed the duties of urban forester for the Statesboro District, and will be stationed at the Chatham County Unit. Farmer has a bachelor's



FARMER



BURGESS

degree from Louisiana Tech University and a master's degree from Clemson. A resident of Savannah, he was previously employed as a forest technician by the U.S. Forest Service in North Carolina, and as a forester by the

Florida Division of Forestry...Forester JOSEPH BURGESS, originally from Norfolk, Virginia, has been assigned to the Cobb County Unit as an urban forester. He holds a master's degree in forest management from the University of Georgia School of Forest Resources, where he was formerly employed as a research assistant. He has an undergraduate degree in economics from Old Dominion University. He and his wife, Martha Willis, live in Stone Mountain...JIMMY DAVIS, who came with the Commission as a patrolman in the Irwin County Unit in 1984, has been named ranger of the Turner County Unit. A native of Fitzgerald, he is earning an associate degree in

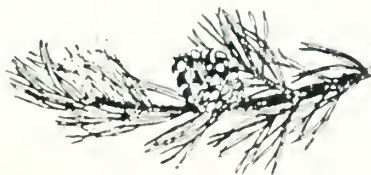


DAVIS



COOK

forestry at Abraham Baldwin College. Davis is active in the Baptist Church and the Optimist Club...MORRIS COOK, who came with the Commission in 1984 as a patrolman in the Calhoun-Clay County Unit and later became a senior patrolman, has been named ranger of the Crisp-Dooly Unit. A native of Ft. Gaines, Cook is a graduate of Clay County High School and attended Andrew College and Georgia Southwest College to earn a BS Degree in Business. He is a member of the Presbyterian Church. Ranger Cook succeeds Donald Anderson, who was transferred to the Ben Hill County Unit.



Miss Gum Spirits of Turpentine and Jim Gillis, president of the American Turpentine Farmers Association, shown at conclusion of pageant.

LISA WESSINGER NEW GUM SPIRITS QUEEN

The Georgia Forestry Association crowned Lisa Wessinger of Toombs County Miss Gum Spirits of Turpentine at the recent GFA convention on Jekyll Island. The 16-year-old daughter of Mr. and Mrs. Donny Peterson will represent Georgia's naval stores industry for the next year.

Lisa attends Vidalia High School where she is a member of the Girls' Trio, the Key Club and FBLA. She is also a majorette and gives private baton lessons.

Miss Gum Spirits was crowned by the 1989 winner, Christian Dixon, also of Vidalia. Lisa was chosen from 17 contestants, all of whom represented gum-producing counties.

Named Miss Toombs County Forestry earlier this year, she plans to attend the University of Georgia and major in pharmacy.

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GEORGIA GREEN AND GROWING**

**CREW VIVIDLY REMEMBERS
'89 MOUNTAIN INFERNO**

**NEW INVENTION TO AID
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Look closely - this tiny bird perched on the corner of Brasstown Bald Visitor's Center takes in a scenic view of North Georgia mountains from the highest point in the state - 4,784 feet above sea level. Open to the public from mid-April through October, Brasstown Bald attracts many bird-watchers. Numerous bird species in the area include ravens that thrive on the high, cold mountain. The highest temperature ever recorded on the mountain was 84 degrees-the lowest was 27 below zero. The Commission maintains a fire tower on the mountain peak.

ON THE COVER - Forest on the shore of Lake Strom Thurman near Augusta reflects typical beauty that fringes the lake's 1200 miles of shoreline. Heavily forested in many areas, the lake's shore, that extends into Georgia and South Carolina, provides habitat for deer, turkey and other wildlife. Camp sites, recreational areas, and state parks are located along the lake - while heavy populations of largemouth bass, hybrids, and stripers offer excellent fishing.

(Photo By Bill Edwards)

1771 MANUFACTURERS AND PROCESSORS DEPEND ON GEORGIA'S FORESTS

From huge rolls of paper and great quantities of lumber to picture frames and engineering stakes - statistics on the manufacture of these and many other products derived from the forests of Georgia are included in a new directory just back from the printer.

The directory of Wood-Using Industries in Georgia has been completed and is being distributed through offices of the Georgia Forestry Commission. The publication is a 1990 listing of plants that manufacture or process wood, and a report of timber volumes used during 1989 by plant type, species, and section of the state.

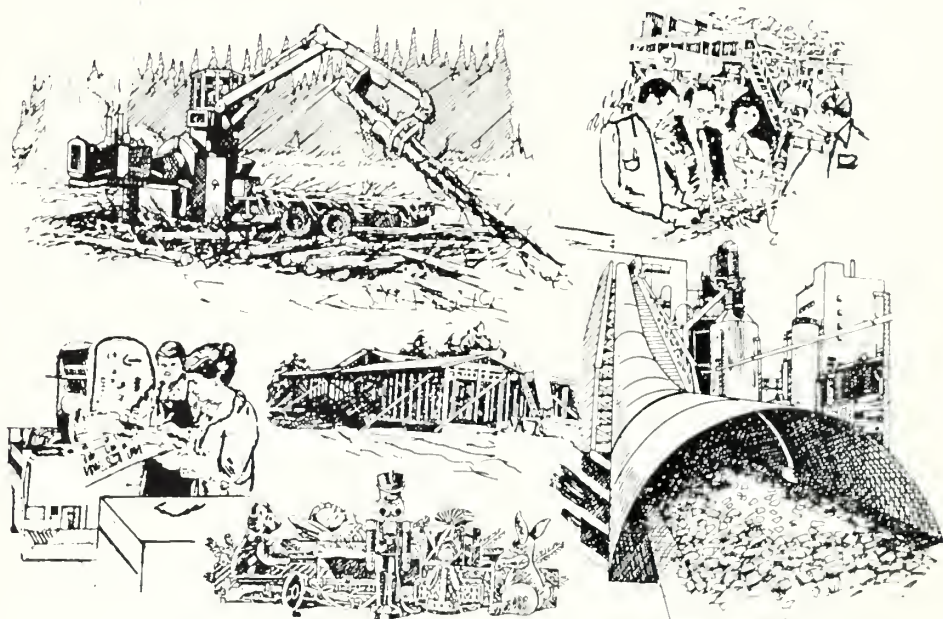
Paul Butts, Commission utilization forester who prepared the 121-page publication, said the directory is prepared as a marketing aid for Georgia grown or manufactured forest products. "The utilization report is designed to show trends in timber production and use, and to emphasize the importance of forestry to the state and local economy," he said.

The publication is based on a statewide survey made by Commission personnel at three year intervals. All plants were contacted by personal visit or telephone, according to Butts.

Primary industries, such as sawmills, are those which use round timber as a raw material, and 521 listings are in this section; secondary industries, such as furniture plants, use lumber and other partially manufactured wood and listings in the secondary processors section totaled 1250, he explained.

The directory also includes 14 pulp mills which process wood, and eleven which process pulp from other mills or waste paper.

Primary manufacturers are listed by plant type, county, facilities, employment class, species used, and major products. Secondary processors are listed by type, county, facilities, employment class, and major products.



The utilization report reveals that round timber use in 1989, excluding pulpwood, firewood, and posts, totaled 3.07 billion board feet. This was only a one percent increase over 1986, but a 134 percent increase over 1964 when the report series started. During this 25 year period, pine sawtimber use increased 189 percent from 922 million board feet.

The directory shows that 34 percent of sawtimber was processed in the southeastern part of the state, 16 percent in the southwestern, 35 percent in the central, 9 percent in the north central, and 6 percent in the north. State pulpwood harvest for these respective areas was 44, 10,

27, 11, and 8 percent. Yellow pine accounted for 87 percent of sawtimber and 79 percent of pulpwood.

The report shows that 158 sawmills processed 81 percent sawtimber, 16 veneer and plywood plants used 16 percent, 18 primary treaters used two percent, and 18 other round timber processors used the remaining one percent.

A section is also included on the production and use of residues such as bark and sawdust from primary manufacturing plants.

Secondary manufacturers include 35 arts and crafts, 7 artificial limb; 21 bark, 8 boat and accessory, 87 box and pallet, 648 cabinet and millwork, 2 antique car body, 2 buggy, 18 display, 1 flexible panel, 12 flooring, 84 furniture, 5 lumber resawing, 7 mobile home parts, 42 mobile home-camper-prefab, 2 molded products, 20 picture frame, 23 independent planers, 50 wood preserving, 25 sign, 9 stake, 8 strand and particle board, 5 truck body, 48 truss, 7 wood fence and other assorted manufacturers.

Material for this comprehensive directory is compiled and published at three year intervals to provide an up-to-date listing of Georgia manufacturers who depend on wood from the state's forests.

DEMONSTRATION FORESTS

Observing,
Learning
And
Enjoying.

Vandalism and petty thievery were rampant on the property when the Georgia Forestry Commission agreed to assume management of the 10,130-acre Dawson Forest back in 1975. "We would put up a gate and it would disappear overnight and then we would put up another gate and it would be stolen," said Director John Mixon. "Finally, people got tired of tearing them down."

Most of the saleable timber had been cut, roads were washed out and undesirable vegetation had taken over much of the land when Atlanta officials asked the Commission 15 years ago to manage the property owned by the city's airport authority. GFC personnel set about implementing a man-

agement plan that ultimately turned the largely abandoned site into a model, diversified forestland.

Today, the property is known as the Dawson Demonstration Forest and during the ceremony earlier this year in which it was dedicated under the new title, Commissioner Calvin O. Carter of the Airport Authority praised the Forestry Commission for taking "a deteriorating piece of land and transforming it into a forest that is healthy and productive."

Under the new role as a demonstration forest, the area is directed by Forest Specialist Winston West. The Fish and Game Division of the Department of Natural Resources manage wildlife in the forest and the U. S. Forest Service and other organizations conduct research

on the property.

The Dawson property represents one of three demonstration forests now maintained by the Commission.

The Dixon Memorial State Forest near Waycross - land ceded to the state by the federal government in 1955 - consists of 35,789 acres, with about two-thirds of the land in forests. It is supervised by Forester Curran Wynn.

Named in honor of the late Hugh M. Dixon, who served on the Commission's Board, the Dixon Memorial State Forest is managed to grow a final crop of pine sawtimber, with production of various other products in intermediate harvesting. The forest also provides for research, training and recreation. The forest lies in Ware and Brantley Counties; the Laura Walker State Park and the Okefenokee Swamp Park are included in the acreage.

The Middle Georgia section of the state is served by the Ernst Brender Demonstration Forest, 4,952 acres of pine and hardwood woodlands in Jones County and near Macon. Named for the late Ernst Brender, well known silviculturist, the purpose for the forest is essentially the same as that of the other two demonstration areas: to provide a setting where foresters, landowners, students, researchers, teachers and others can visit to see actual field demonstrations that employ good forestry practices and to learn more about the environment. Forester Specialist Nathan McClure supervises the Brender project.

The Darrell A. Busch Memorial Arboretum, named for a young forester who worked at the forest prior to his untimely death in 1989, is also located on the Brender Forest and has become an interesting added attraction for visitors.

**THE DEMONSTRATION AREA
FOCUSES FORESTRY IN THREE
DIMENSIONAL TERMS BY
SHOWING VISITORS HOW
NEWLY PLANTED TREES LOOK
AND THEN SHOWING HOW THEY
WILL LOOK IN 20 YEARS.**



Mixon said the recent re-classification of the Dawson property as a demonstration forest now gives the Commission three showcase forests, strategically located in North, Central and South Georgia, to provide all interested organizations and individuals an opportunity to observe and

Commission Director John Mixon speaks at the recent dedication of the Dawson Demonstration Forest. The Commission has managed the large tract since 1975, but the dedication marked the beginning of a new era in which the forest will serve as a multi-purpose demonstration area.

study the interesting cycle of a growing forest and the modern practices necessary to enhance its productivity.

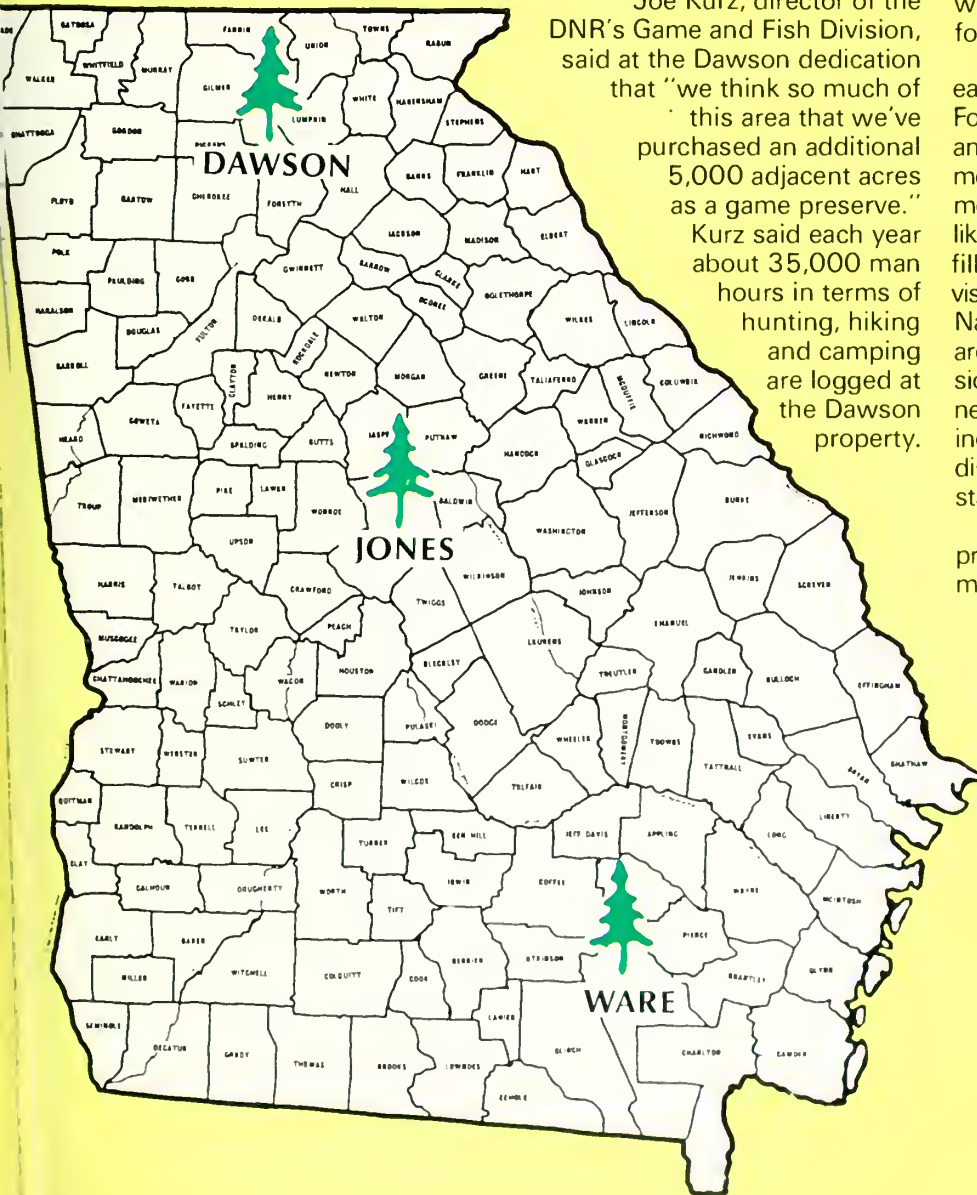
Joe Kurz, director of the DNR's Game and Fish Division, said at the Dawson dedication that "we think so much of this area that we've purchased an additional 5,000 adjacent acres as a game preserve."

Kurz said each year about 35,000 man hours in terms of hunting, hiking and camping are logged at the Dawson property.

He said his agency works with Quails Unlimited and the National Wild Turkey Association in establishing wildlife food plots throughout the forest.

J. Lamar Dawson, director, Southeastern Forest Experiment Station, U. S. Forest Service, said research foresters and others involved must now think more in visual terms as "people are now more interested in what a forest looks like." He said the demonstration forest fills that need. Ken Henderson, supervisor of the Chattahoochee and Oconee National Forests, said the demonstration area focuses forestry in three dimensional terms by showing visitors how newly planted trees look and then showing how they will look in 20 years by directing their attention to mature stands.

Mixon said the emphasis on timber production, water quality, wildlife management and recreation at the three forests presents a wide appeal to visitors and Commission personnel will continue to make improvements that are deemed necessary to help the public see forestry in its best light.





G. Payne

"Worst fire I've ever been on - and the longest. It lasted 28 hours."



DeWeese

"When the updraft pulled the flames over us, it was like fire and brimstone raining down."



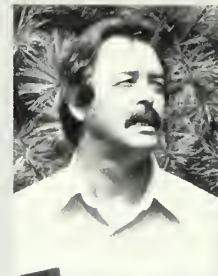
Dillingham

"Spot fires were breaking out all around us...on our right flank, four or five acres went up in a solid sheet of flame."



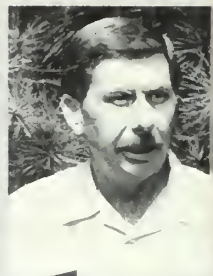
M. Payne

"The smoke was like being in a chimney. You could touch the tractor, but you couldn't see it."



Rhodes

"Training taught us everything that could go wrong on a fire. All of those things went wrong on that fire."



Hood

"From the tower, I saw three streams of smoke close together. It looked like arson."

EASTER FIRE

Editor's Note: This story was written in 1989. Publication was suspended pending an arson investigation. However, the account remains a timely example of the unchanging potential danger confronting firefighters.

Gordon Payne lay face down in the firebreak trying to breathe. He was hoping to stay alive until Easter-tomorrow. Smoke was so thick he could not see more than 40 feet. He stayed close to the ground, drawing in as much oxygen as possible. Ten feet away, Michael Payne was face down. Gordon pushed up and looked at Michael. He could barely make out the outlines of Ronald DeWeese and Charles Dillingham. They were lying close to the two big crawler tractors, their faces stuck into hand-dug holes, trying to breathe what little oxygen was left.

Gordon Payne made the decision to dig in on the mountain so they would not lose their advantage in fighting the remote fire. They were well above 2,600 feet elevation in a chain of mountains stretching across the northern tip of Georgia into North Carolina. He had taken the risk because this wildfire could erupt into a major disaster and spread across the isolated region. He had taken a

calculated risk, knowing the odds were positive, but now with the smoke thickening and spot fires breaking out all around them, the odds were changing. They had lost radio contact with the Cessna 182 flying in from the far end of the district. Gordon Payne knew the aircraft should be there any minute to report the condition of the fire around them, giving them directions for the best way out and where to plow breaks. The roar of the fire was growing louder. He listened for the Cessna's engine, but could hear only the increasing roar of the fire burning up toward them from both sides of the mountain. There is something firefighters call "hearing the train." It is the thing that new firefighters are most unprepared for: although they have many hours of training, there can be no real preparation for the incredible roar of a big forest fire that resembles the head-on sound of an approaching train.

Gordon Payne kept trying the radio. Just one radio contact could reverse the situation. He remembered back many years when firefighters had no radios. Some of the younger firefighters took the radios for granted, but Gordon Payne regarded them as a luxury. He recalls running through burning forests to chase down a plowing crawler tractor. When he caught the crawler, he would throw

rocks at the steel cage encasing the driver to get his attention.

He tried the radio again. Coughing and spitting out black particles, Gordon Payne knew they would have to move soon - even without radio contact. That would involve risk to the crew and the risk of having the fire go out of control and sweep through the mountain range. The longer they waited, the closer "the train" came.

Ricky Hood had spotted the fire from Brasstown Bald tower - the highest point in Georgia. It was almost 10 o'clock in the morning when Hood, a Commission patrolman from Union County, saw a faint curl of smoke rising from Jonica Gap. He took a reading on the alidade and pinpointed the smoke as coming from 18 miles away on Mill Mountain. Hood called Forest Ranger Everett Rhodes and Patrolman Gordon Payne, then contacted area RFD units. Within five minutes personnel and equipment were on the way to Jonica Gap.

As the crow flies, it is less than 70 miles from Brasstown Bald to Atlanta. On a clear day, the skyline of Atlanta can be seen from the tower that Hood operates. But today, a heavy haze shrouded the mountains, and looking toward Jonica Gap, only 18 miles away, it was difficult to determine the extent of the smoke.

Hood adjusted his binoculars and saw what seemed to be a third ribbon

of smoke. But the distant filaments of smoke were close together and mixed with haze. He was not sure; maybe the wind had separated the rising smoke. He knew that the three sources of smoke so close together could mean arson.

It was Saturday, and everyone from Fannin-Towns-Union Forestry Unit were on standby duty. Only yesterday, there had been a fire on Mills Mountain, but Union County personnel squelched the blaze in less than two hours and returned home looking forward to a quiet Easter weekend. The previous day's fire had been on the north side of the mountain in tall timber. The wind had been against the fire, providing a vital advantage in stopping a mountain fire.

Fighting fire in the mountains is different from fighting fire on flat terrain. In the flatlands, breaks can be plowed as effective deterrents almost anywhere. But in mountainous terrain, fire

moves quickly upward, and breaks must be plowed above the fire - usually near the top of the mountain to make sure the fire does not cross to the other side. Rising heat dries all vegetation and creates an intense up-draft that pulls the flames up in sheets. The steeper the mountain slope, the worse the condition, the faster the fire rises.

Mills Mountain is steep, so steep that when the crawler tractors had attempted to plow straight up during yesterday's fire, the big machines slid back down the mountain in their tracks. But wind was strong against yesterday's fire, and the crawlers quickly surrounded the blaze with lateral breaks that caused the fire to die out in all directions.

When Gordon and Michael Payne arrived at the Saturday fire, they found a different situation. Gordon stopped the truck and looked up through the smoke already beginning to engulf

them. The fire was now on the south side of the mountain, burning rapidly up the steep slope through 25 acres of clearcut debris. The drying residue of the clearcut left a potential tinderbox for fire. Unlike yesterday, there was not a single fire burning slowly through tall timber and an opposing wind - but three separated fires sweeping upward with strong backwinds that threatened to converge it into one giant blaze that could cross over the mountain top. If it was not stopped, the scene could be repeated over and over again until the fire grew to such strength that nothing but rain could stop it. Rain was not expected for a week.

Gordon now knew what he suspected yesterday. The fire had been deliberately set. A single fire like yesterday's could have been an accident or an occurrence of nature; but three widely separated fires burning simultaneously on the same side of the mountain through clearcut debris was too much to be a coincidence. The arsonist had apparently not been satisfied with yesterday's damage and was



Illustration By Ranger Monroe Gaines

countryside.

Michael Payne unloaded the tractor. Gordon drove the truck to a better location where he met Ronald DeWeese and Charles Dillingham with the Fannin County tractor. Down the mountainside, they saw a group of RFD volunteers unloading tools. The RFD truck was parked at the roadside, useless now that the blaze had climbed out of range on the high slope.

Gordon talked with the Fannin County personnel; already the roar of the fire was so loud they had to shout. They quickly decided on routes for plowing breaks as the RFD volunteers climbed toward them, carrying tools to make breaks by hand.

The two tractors went in opposite directions up the mountainside as the RFD crews continued to climb. But soon Gordon saw the fire was out-distancing them, and he glimpsed burning debris blowing up and over them toward the mountain top. DeWeese and Dillingham also saw the debris and turned their tractor to meet Gordon Payne. Before the tractors met, debris had gone over the mountain top and touched off spot fires that threatened to trap them.

By the time the tractors met, the smoke was so thick they could not see any way out except to go back down the slope. They all knew that going back down the mountain would lose the advantage they had gained, and the fire could then sweep unhindered through the mountains.

So Gordon Payne said they should dig in, wait for a break in the smoke, and keep trying for radio contact with the Cessna. They plowed a wide break, positioned the tractors, and lay face down hoping the wind would change and the Cessna would arrive with radio contact.

Fifteen minutes later the situation had worsened. The wind favored the fire. Smoke had thickened, and now burning debris was dropping all around them. It was impossible to breathe unless they remained face down; and visibility was becoming more limited by the minute. Gordon Payne knew they would have to make a move soon - with or without radio contact. He started to stand up when Ranger Everett Rhodes' voice crackled over the radio telling them to "get out now...don't get burned up." Rhodes had traveled as far up the mountain-

side as possible in his pick-up truck.

Gordon Payne knew their time was up. He had to get everybody together and try to make it out on the tractors. As he started to stand up, he felt an almost imperceptible breeze that gradually became a gust of wind. He rolled over on his back and looked up to see the smoke clearing. Then he heard the roar of the Cessna as it flew over them at treetop level. He saw the glint of the plane's wings through the clearing smoke as it whizzed over and turned to make another circle.

Gordon Payne sat up, still coughing, but he could breathe better as the growing wind changed direction and began to clear the smoke. The Cessna made another pass overhead, and this time Payne could see the reflecting disc of the propeller in the sun as the radio crackled and he established contact with the pilot.

Payne stood up and ran by DeWeese and Dillingham, telling them he had made contact. He continued to run through the clearing smoke and stopped where the mountain dropped off sharply and saw the Cessna in the distance, peeling off and sliding down the steep mountainside, following the burning tree line as it appeared and disappeared in and out of the whirling smoke.

On its return circle, Cessna pilot William (J.J.) Garrett relayed which route for each tractor to take and instructed RFD volunteers where to make breaks. Coughing and spitting out soot, the two crawler crews worked from another angle.

The location of the fire still made it impossible for the big crawlers to plow straight up without sliding back down in their tracks. But now, directed by the Cessna, they plowed the mountainside and made every break count.

For the next 26 hours, the crawlers played a dangerous game of out-maneuvering the volatile fire that swept unpredictably in all directions. Crawlers and RFD volunteers moved like ghosts through the smokey roar. At times, the fire seemed to have a mind of its own - as if it were trying to dodge the firelanes and outguess the Cessna. For many hours it seemed the firefighters were only establishing a fragile stalemate that could be broken by a bad wind or mechanical failure of a crawler.

There was constant danger of being trapped by the fire, and fatigue was beginning to take its toll on the firefighters as day wore into night. Then

the tide of the fire began to change. Strands of flame running across the mountain became thinner and began to die out in different directions as they struck firelines. Soon, the intensity of the fire began to deteriorate, and by morning it was contained. Now it was the fire that was trapped by the crawlers - encircled and choked by a network of lines that crisscrossed the mountain.

It was almost noon of the next day when the firefighters converged halfway up the mountain. The crawlers stopped and the men stood still, looking up the smoldering slope. There was smoke, but no more fire.

The soot-blackened firefighters leaned against the crawlers for a long time, but had little to say. They gathered up their gear, loaded the crawlers on the trucks, and left the mountain to billow off the last remnants of a giant shroud of smoke that blotted out the sun.

In spite of blue haze hanging over the mountains, communities as far as 40 miles away saw smoke clouds rising from the gap. As the sun rose on Easter Sunday, families looked at it from their yards and porches. Drivers stopped on winding mountain roads and stared in the direction of Jonica Gap. People walked to vantage points on the quiet Sunday morning streets of small towns and looked into the distance. They did not know that by the time they saw the clouds of smoke billowing high in the sky, the fire was over.

Gordon Payne went home and looked into the mirror. He was completely blackened by soot and smoke. Only the whites of his eyes were unstained. His Commission uniform was blackened in a way that only smoke and soot of a forest wildfire can turn the color of clothes. He had not eaten or slept for 28 hours. He stretched out on the floor and went to sleep.

Several days after the fire, Gordon and Michael Payne drove through Jonica Gap. The charred mountain stood out like a scab on the green slopes stretching toward the horizon. Payne knew if this remote fire had not been stopped where it started, it could have spread through the entire mountain range, causing untold millions of dollars worth of damage.

Gordon Payne looked out the truck window as they drove past. "That was a bad one," he said. "But it could have been worse."

Wooden Bridges Offer Effective Alternative

A statewide wooden bridge initiative has been launched by the Commission and other co-sponsors with the goal of building at least one new wooden bridge in every Georgia county.

The project is a combined effort of the Commission, U. S. Forest Service and county governments needing to replace bridges on secondary roads. A dedication service for the first completed timber bridge in the proposed series was recently held in Putnam County.

Commission research shows that numerous secondary road bridges throughout the state are substandard, obsolete, or both. Some of these bridges have also been classified in reports as "dangerous." Commission personnel in all areas of the state have firsthand knowledge of bridge conditions; they know which bridges not to cross with a tractor in case of wildfire.

With modern technology applied, wooden bridges on secondary roads will provide safe and reliable transportation routes for 40 to 50 years. These sturdy durable structures require little maintenance.

BACKGROUND

A 1986 report from the Federal Highway Administration (FHWA) shows that approximately 75 percent of the nation's 575,000 bridges are on secondary and rural roads. The study also shows that more than 50 percent of these bridges are structurally or functionally deficient; most of these bridges were built in the 1930s and 1940s.

The federal study recognized that wooden bridges would be suitable replacements for their deficient counterparts. The federal government has funded research to develop a number of wood bridge programs. The basis for the wood bridge funding is research showing that there are modern wood bridge systems that can be economical, durable, and structurally efficient alternatives to structural steel and rein-

forced concrete systems. (Data gathered from a 1986 study by the Wisconsin Department of Transportation shows that wood bridges are cost competitive for short span structures.)

COMMISSION PERSPECTIVE

Based on federal studies and internal findings, the Commission's Research Department adopted with aid from federal fundings a wooden bridge promotion for Georgia's secondary roads. The objective is to provide economical, safe and reliable transportation for an increasing overlap of urban/rural populations - while simultaneously introducing a new market for wood through engineered bridges.

Commission officials emphasize the benefits of such a program could be of

considerable importance to areas taking advantage of the wooden bridge initiative; timber could often be cut, processed, and installed by the local labor force - thus giving an immediate boost to the area's economy. Wooden bridges in such areas would not only benefit travelers for possibly the next half century, but they would also enhance local economic development by expanding the market for timber.

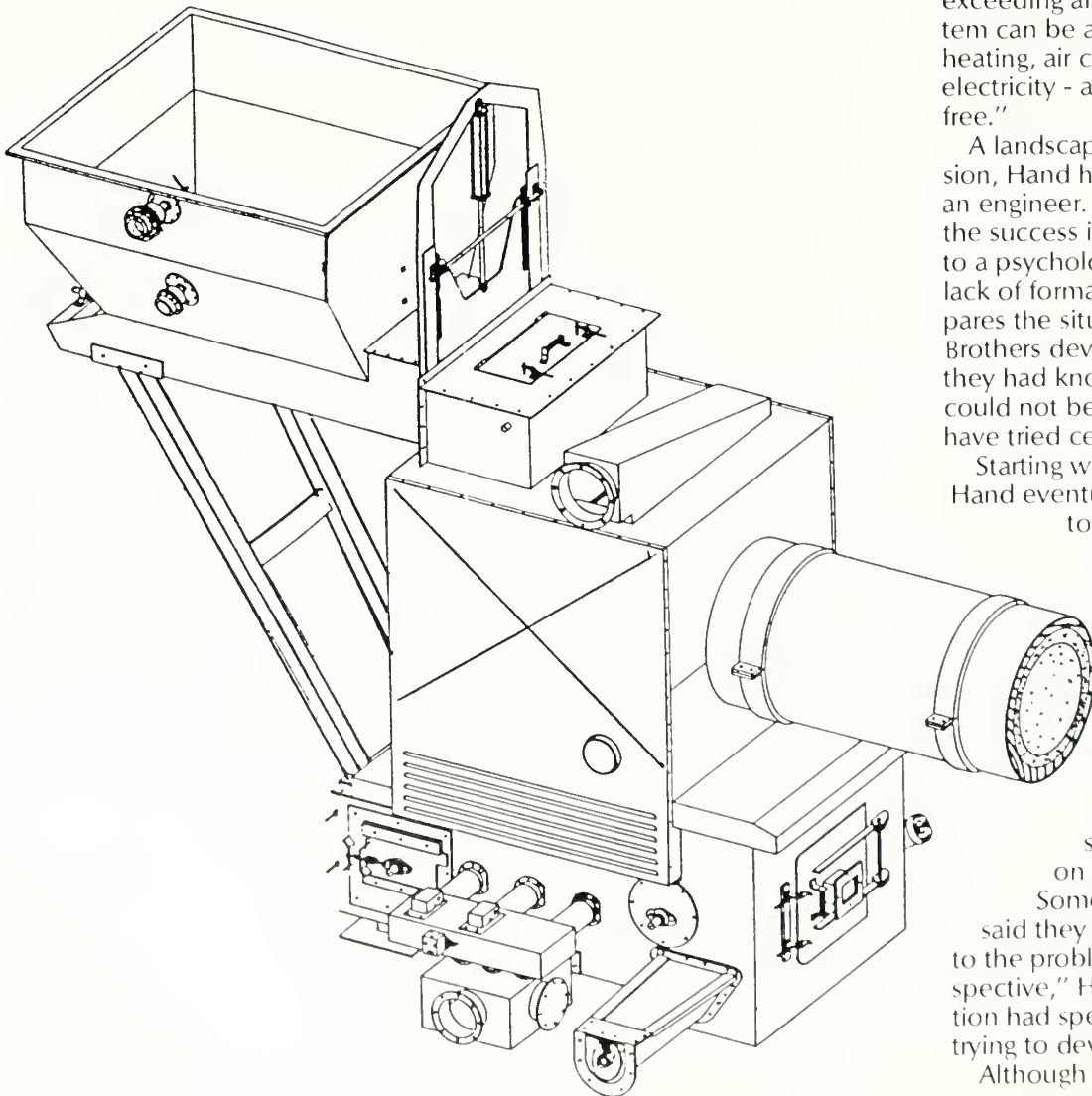
Although made from wood, the proposed bridges in Georgia's program could hardly be more modern. Treated with the latest preservatives, the structures could last even past the half century mark as a reminder of wood's durability. Also, contemporary wooden bridges combine new structural material with modern design and construction techniques. For example, today's wood
(continued on pg. 18)



Visitors and news media look over new timber bridge at dedication service in Putnam County. The statewide bridge replacement program is the combined effort of the Commission, U. S. Forest Service and county governments needing bridge replacements. The bridge is the first completed in a statewide series of proposed timber bridges to replace obsolete and substandard bridges on Georgia's secondary roads. The goal is a new timber bridge in every Georgia county.

Forest Industries And Environment Could Benefit From New Invention

By
Bill
Edwards



Then years ago in the midst of the OPEC oil embargo, David Hand started tinkering with a small wood-burning contraption that he hoped would save on heating costs for his greenhouse during the cold, Virginia winters. Those efforts evolved into a patented "Thermal Burner" that the inventor believes could offer international benefits to the forest industry and environmental concerns.

The Atlanta Journal and Constitution newspapers recently installed the first Thermal Burner in Georgia. Located at the newspaper's Norcross facility, the system is being used to burn various waste products, including wooden pallets, waste paper (that can no longer be recycled), waste ink, motor oil and rubber tires.

"This is not an incinerator," inventor David Hand emphasized. "It is a waste-to-energy conversion system that will combust a wide variety of waste materials while meeting or exceeding all EPA standards. The system can be adapted to produce heating, air conditioning, steam and electricity - all virtually pollution free."

A landscape architect by profession, Hand has no formal training as an engineer. He attributes much of the success in developing his system to a psychological advantage - his lack of formal training. Hand compares the situation to the Wright Brothers developing the airplane. "If they had known what supposedly could not be done, they would not have tried certain things," Hand said.

Starting with a 14-inch metal box, Hand eventually refined the system to a burner that sustains temperatures between 2,500 and 3,000 degrees Fahrenheit. Word spread and engineers from various corporations came to see a development they could not believe - a system that some corporate engineering staffs had been working on for years.

Some of them (engineers) said they had just been too close to the problem to get a good perspective," Hand said. "One corporation had spent more than \$2 million trying to develop a similar system."

Although reluctant to go into

details on the patented design, Hand describes the burner as basically a fire tube channeling materials into a combustion chamber that reaches incredibly high temperatures. The chamber utilizes a magnetic device for separating metals that can be reclaimed.

Marketed by Waste Conversion Systems, Inc. (Atlanta), the system is designed to convert most waste products into ecologically safe energy. Wood wastes, rubber tires, agricultural wastes, refuse derived fuel, and various industrial wastes can be converted. However, Hand describes the system as "a natural for the forestry industry - because there are huge amounts of residue and waste in forestry related industries."

"For example," Hand said, "the Pacific Northwest creates mountains of wood waste as big as buildings in downtown Atlanta. All the big wood producing states such as Georgia, Mississippi and Virginia could benefit from the system."

Hand says the system is equally effective for woodchips, sawdust, planer shavings and pallets. He emphasized that the Thermal Burner can burn wood cleaner than traditional methods can burn oil - but not cleaner than natural gas can be burned.

"But - you have to take into consideration," Hand said, "that with natural gas you are taking a product from underground and adding it to the environment. So even though it's burning cleaner, the amount of carbon dioxide in the air is being increased."

In contrast, Hand pointed out that wood is in a different sphere of nature. When a tree grows, decays and dies, the same by-products are released as when wood is burned.

"So you're not adding to air pollution," Hand said, "you're just accelerating a natural process. The result is the same with any biomass product." He added that, from a business standpoint, burning waste wood for energy can lower utility costs 50 to 100 percent.

There is also the benefit that wood is a renewable resource. Properly managed, wood will always be available. Hand points out that every ton of wood waste converted into energy replaces three barrels of oil.

In relation to society's increasing concerns with pollution, energy, con-



Inventor David Hand checks control panel of a Thermal Burner at Atlanta Journal/Constitution Norcross facility. Hand developed the waste-to-energy conversion system over a period of 10 years. He describes the system as "a natural" for forestry related industries. The Journal/Constitution system is the first of its kind to be installed in Georgia.

servation and environmental safeguards, Hand believes his invention could not have come along at a better time. "It's not the answer to all the world's problems," he said, "but it is the answer to some very critical problems for small and large industries operating in a society that can no longer afford to be careless about cost efficiency or environmental problems."

In relation to forest products industries, Hand gives dry kiln/planer mill joint operations as an example. These operations can produce large quantities of dry planer shavings, which his system is designed to burn so more lumber can be dried. In this situation, the burner becomes a sort of perpetual motion system feeding off itself.

"That's exactly what we're doing in a Washington state system that dries cedar," Hand said. "But the system can be used just as efficiently with pine or any other lumber. All kilns produce this potential fuel, and the payback can be tremendous."

Another plus in the system's design is that it does not require that wood contain a certain degree of moisture to be burned. The burner is

designed to combust wood ranging from 10 to 25 percent moisture content. This could be of considerable benefit to many wood industries confronted with mountains of green sawdust and other residue. Hand proposes the installation of a drying facility so this problem waste material can be used as an energy source without creating pollution problems.

"Our system will dry 250 tons of green sawdust a day," Hand said. "This can take a tremendous load off the landfill problem."

Hand's studies show that the use of his system can increase the lifespan of a landfill from one to 10 years, depending on variables.

If the new system can actually take the pressure off landfills to the extent that Hand predicts, it will have done a good day's work. Environmentalists warn of a serious shortage of landfills in some areas, while other waste-glutted sections are closing landfills right and left. Some sources say half the landfills now in use in the United States will be filled to capacity and closed within the next five years. Meanwhile, there is increasing concern over soil and water contamination.

Nevertheless, Hand remains optimistic regarding the pollution pressure that his new converter can relieve. "The system burns hot, effective and clean," Hand said. "And it's affordable to large and small industries. Although it is a natural for forest products industries, it's up to the buyer what is burned and converted into energy."

So far, the system has not been marketed as a hazardous waste burner. Hand believes more testing is needed in this area; he wants to be sure. However, those involved in marketing believe it is only a matter of time. The inventor has come a long way from his first, crude prototype fashioned in a blacksmith's shop. Hand's sophisticated operation now includes \$250,000 worth of testing equipment capable of testing 42,000 different compounds that may be formed in smoke stack gases.

"It took a long time for me to realize that I had something unique that really worked," Hand said. "Now I know it works. In fact, I know that what this system does has never been accomplished with this degree of effectiveness, cost efficiency, fueling and environmental benefits."

Georgia Forestry/Fall 1990/11



Patrolman Darrell Floyd and Twigg County Forest Ranger Frank Fowler study aerial case map at the unit office in Jeffersonville.

**By
Mollie
Batts**

TWIGGS COUNTY FORESTRY UNIT

Ranger Frank Fowler of the Twigg County Forestry Unit said from his office in Jeffersonville last week that he doesn't have to spend a lot of time training new personnel. When patrolmen come on board in Twigg, they tend to make it a lifetime career. Turnover is rare.

The outstanding performance of the unit can probably be attributed to the many years the crew has been working together. Ranger Fowler has been with the Commission for 20 years; Patrolman Larry Pope, 22 years; Patrolman Dan Hasty, 21 years; Patrolman George Rouse, 16 years and Patrolman Darrell Floyd came two years ago to replace Towerman Lamar (Jake) McFarland, who died after 32 years of service. The position was upgraded to patrolman when Floyd was employed by the unit.

Ranger Fowler began working with the Commission in 1970 after two years in the army. He started as a patrolman, and was named ranger three years ago. A Twigg County native, he and his wife, Linda, have two children. Fowler commented that he and his crew "all get along so well together. We feel like we're all equal. We've been together for so long we're a little family deal." Fowler spends time with the Brian Center Nursing Home. He is treasurer of the Brian Center Family Council, a group of people who act as liasons between the residents and the administration.

Patrolman Pope worked in the timber industry before starting his career with the Commission in 1967, so forestry was already a familiar vocation with him. He

said everyone in the unit "does his job without being asked, so the work is done efficiently." He added that the unit has always had good supervisors to provide a healthy working environment.

Pope pointed out that each patrolman has a talent or skill he can do especially well, and his is electrical work. He's been able to use his skills in the Twigg County Unit and many other units as well. A few months ago, he was wiring gas pumps all around the state. Pope and his wife, Jackie, have two children.

Although Patrolman Floyd has been in the unit only two years, he has already carved a niche for himself in the routine. He is most responsible for issuing burning permits to Twigg County residents, and said he issued 457 between July 1, 1989 and June 22, 1990. He said the Twigg County crew is often called upon to work in other units, such as the Johnson County Unit, where a new office building is being built. Their close proximity to the Macon headquarters often lends them the "privilege" of helping out there, which they do willingly. Floyd and his wife, Mindy, have a two-year-old son named Chad and one "on the way" that is due in October.

Patrolman Rouse was attracted to the firefighting aspect of the Commission when he started with the Twigg Unit in 1974. He said he has fought many fires in his career, as Twigg County has the most fires in the district. The worst fire he ever fought, he said, was on a day he was supposed to have been off. "I wasn't exact-



At left, Patrolman George Rouse mounts his tractor to respond to a fire call. Patrolman Larry Pope, above, communicates by radio with a neighboring county unit. Patrolman Dan Hasty, below, is engaged in a carpentry project.

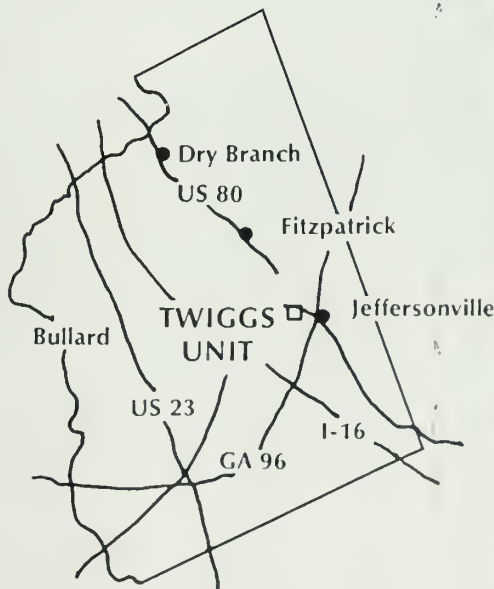
ly scared for my life," he said, "but I sure felt the heat!" Rouse and his wife Robin, have five children, and attend Higgsville Baptist Church, where he has been a deacon for over 20 years.

Patrolman Hasty's career with the unit includes 21 years of service. Hasty's special skill is welding, as demonstrated by a four-foot miniature replica of a Commission fire tower, which stands in the front yard of the unit office. Hasty said he built the little tower out of reinforcement bars and scrap metal. He has also used his welding skills to help build the countless number of parade floats the unit is called upon to construct. He is a member of Prospect Methodist Church and has four children with his wife, Myra.

Reforestation Forester Kevin Johnson gets to know several county units with his job. He works with the

Twiggs County Unit and said, "This unit has given me a lot of help with landowners." One of these landowners is Chuck Leavell, this year's Georgia Tree Farmer of the Year. Ranger Fowler said Leavell put considerable energy into the tree farm and worked to make it the pinnacle of good management practices it is today.

District Forester Bennie Brant made some comments about the unit: "They furnish the landowners with a good management program; they have a large number of fires but keep them small; they have a good working relationship with the landowners and the people of the county; they can do any job asked of them willingly and with a good attitude; and their records and reports are neat, accurate and on time. To sum it up, they have an exceptional unit."



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LYME DISEASE SPREADING IN GEORGIA

It has been called Borreliosis, the "Suburban Disease" and the "Great Imitator," but its common name, **Lyme Disease**, is striking fear into everyone who spends time outdoors.

In the last six years, the disease has tripled in humans and the number of cases continues to rise. The heaviest concentrations of Lyme has shown up in the Northeast, upper Midwest and along the northern California coast. Between 1980 and 1988, 13,795 cases were reported in these areas, and 5,000 cases were officially recorded in 1988.

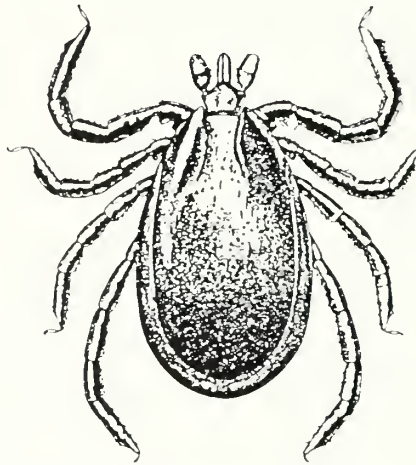
The peak months for Lyme activity are June and July, but in May of 1989, reported cases were considerably higher. New York's Westchester and Suffolk Counties reported 467 cases, a quadrupled increase over 1988. The disease has been reported in 44 of the 50 states.

Until 1986, Georgia had no confirmed cases of Lyme, but it has seen a sharp increase over the past three years. In 1989, Lyme became the state's number one reported vectorborne disease. In 1987, four cases were reported; that number rose to 59 in 1988 and in 1989, cases suddenly jumped to 715. The entire state can be considered endemic, according to the Department of Human Resources, with cases being reported in 87 Georgia counties.

Of the 715 reported cases in 1989. The five major infected counties were Upson (50), Richmond (44), Wilkes (39), DeKalb (33) and Fulton (27). A group of counties across the mid-state attributed to the majority of the cases and attained the highest rates. So far this year, 118 cases have been recorded.

Lyme disease is caused by *Borrelia burgdorferi*, a bacterium no larger than the period at the end of this sentence. It infects the blood and tissues of many mammals. The main vectors, which are homes for ticks, are deer. The *Ixodes* tick is the primary transmitter of the disease. The tick has a four stage life cycle but three stages, larval, nymphal and adult are most infective to animals.

In the larval stage, the tick usually infects



This is a greatly enlarged drawing of the male Ixodes tick, a tiny insect that measures about 1/16 of an inch in length.

smaller animals such as the white-footed mouse. Medium-sized mammals, including dogs, possums, raccoons and people, are the targets during the nymph stage. Adult ticks, especially in the Northeast and Midwest, mainly feed off the white-tailed deer. The larval and nymphal stages have been found on 30 different bird species; this may be a contributing factor to the spreading of the disease.

In animals, such as dogs, cats, horses, cows, sheep and goats, fever lethargy, decreased appetite, sudden lameness, joint swelling and encephalitis are a few symptoms related to the disease.

Commission Entomologist Terry Price, says all should "be aware that house pets can get Lyme and be reservoirs of the disease. People should keep their pets dipped and sprayed so they will not contract the disease."

The bite from a Lyme infected tick on humans is usually marked by a rash which resembles a bull's-eye. The bull's-eye looks like a spreading red circle surrounding a small white area that frequently contains a welt. Many victims never know they have been bitten until the rash appears two to five weeks after the initial contact. However, the rash does not appear in 30 percent of the victims.

"The rash is one of the first symptoms a victim of Lyme will have," Price said. "But many times, the rash will appear other than where the tick was attached."

Lyme disease becomes the "great imitator" once the results from the bite take effect. Many victims experience nausea, flu, numbness, visual disturbances, swelling of joints and pain similar to that of arthritis. A small number of people experience heart blockage thus requiring a pacemaker. Confusion and forgetfulness misdiagnosed as Alzheimer's disease, attacks on the nervous system producing symptoms similar to meningitis and encephalitis, and loss of muscular coordination appearing to be multiple sclerosis, makes the disease difficult to identify.

Although difficult to diagnose, the disease can be detected and treated early. Antibiotics, including penicillin and tetracycline, are usually the most effective treatment for the first stages. If not combated early, intravenous injections of antibiotics, such as penicillin or cephalosporins, may be required for long periods of time.

A form of Lyme was found in Europe almost a century ago. It was technically called erythema chronicum migrans (ECM) and described as "a chronic red rash that spreads." Overseas, Lyme has been found on every continent except for Antarctica. Mother Earth News reports that some "investigators say there's also evidence that both biting flies and mosquitoes are spreading Lyme.

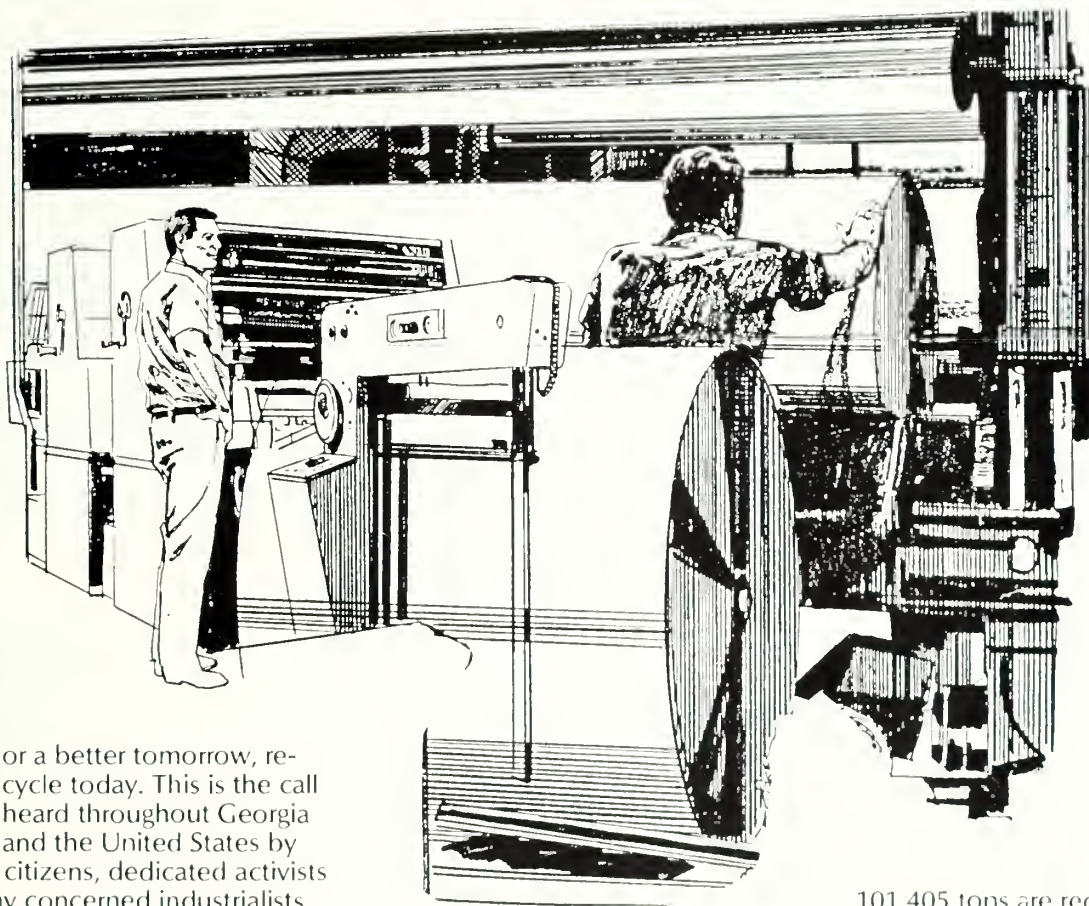
In 1754, a Swedish naturalist, Peter Kalm, after returning from a three-year study in America wrote about ticks in the Hudson River Valley: "This small vile creature may, in the future, cause the inhabitants of this land great damage unless a method is discovered which will prevent it from increasing at such a shocking rate."

An arsenal of precautions must be taken against the disease, which was first identified in 1975 in Lyme, Conn.

(continued on pg. 1)

GEORGIA LEADS THE NATION

By Robbie Burns



For a better tomorrow, recycle today. This is the call heard throughout Georgia and the United States by

ordinary citizens, dedicated activists and many concerned industrialists.

The idea of recycling has been around for years, but a major push, prompted by a recently renewed environmental awareness, is now being made in the hopes of saving many areas of our environment from possible destruction. A focal point of this battle cry is the newspaper industry.

On an average each year, the United States uses over 75 million tons of paper and allied products, while only 26 percent is recycled. In 1989 alone, Americans used 12.3 billion tons of newsprint and only 37 percent, or 5.1 million tons, were

recycled.

Dennis Berry, President of the Atlanta Journal-Constitution, said that Georgia newspapers lead the United States in recycled newsprint. Over 36 percent of newspapers used by Georgia citizens are recycled, as compared to the national average of 14 percent, he said.

The ANPA (American Newspaper Publishers Association) and API (American Paper Institute) states that 277,377 tons of newsprint is consumed in Georgia each year and

101,405 tons are recycled.

The Journal-Constitution uses 13,000 tons of paper each month and 41.2 percent (5,400 tons) of that comes from recycled paper. Meantime, Wilbur Wright, Building Services Manager for The Macon Telegraph and News, said that in June of this year his newspaper used 570.4 tons of newsprint and 25 to 30 percent was recycled. Forty-two tons of waste paper, wrappers, pre-papers and single copy returns from the Telegraph and News were also sent for recycling, Wright said. Lyle Lee, Public Affairs official for The Columbus Ledger and Enquirer, reported

that the paper uses 40 percent recycled newsprint. The New York Times now uses around eight percent recycled newsprint and a goal of 40 percent is set for the year 2000.

"There is an ever increasing pressure to use recycled newsprint and to support newspaper recovery," Berry said.

As far back as 1980, the United States was experiencing problems with large amounts of waste paper that was being dumped into landfills. That year 62 percent was of scrap paper that was disposed into landfills, taking up valuable land area at a cost of \$30 to \$100 a ton.

Walker Rivers, State Stewardship Coordinator for the Forestry Commission, said "if picking up and recycling is not done, then new landfills may have to be built which will cost a lot of money."

In Georgia, newspapers account for six to seven percent of the landfill while another 18 percent comes from yard wastes, but Berry says the state is doing a good job of battling this problem. "About 40 to 45 percent of all newspapers in the state are now being recovered for recycling," he said. "The landfill problems are being helped by the recovery of

newspapers." This figure is estimated to jump to 51.6 percent by 1995.

Each ton of waste paper separated from municipal solid waste saves more than three cubic yards of landfill space, but a 1989 EPA (Environmental Protection Agency) report shows that the nation continues to dig a hole for itself. The EPA states that by the year 2000, Americans will collect 190 million tons of municipal solid waste. Much of this will enter dwindling landfills and 41 percent of it will be paper. In 1978, there was an estimated 14,000 landfills, today there is only 5,500. By the year 2003, it is projected that 1,500 will remain.

Wright said Georgia and the rest of the country, including major cities such as New York, could face even more serious problems by the turn of the century. "New York city has two high Landfills," he said, "and by the year 2000, if recycling isn't done extensively, these landfills will reach the heights of 50 story buildings!" Legislation is now playing an important role to ensure that recycling will take place, he noted.

"At one time, economics were the major considerations, but now the legal angle is coming to the front,

and the paper industry may have to recycle a specific amount," said Utilization Forester Paul Butts of The Georgia Forestry Commission.

This year, The Georgia Comprehensive Solid Waste Management Act was passed. The act states that by 1995, all governments (local, city and state) must reduce waste by 25 percent. Georgia is following in the footsteps of Connecticut and California which have passed "mandatory use" legislation.

The Connecticut and California laws state that a specific amount of recycled newsprint must be used in their papers. At the present time, Connecticut law calls for 40 percent of all newsprint to contain recycled material. By 1998, newspaper in that state must use 90 percent recycled paper.

H. Hugh Stevens, Jr., General Counsel for the North Carolina Press Association, reports that as more and more states require newspapers to buy more recycled sheet, there will be a rapidly rising demand chasing a slowly rising supply. The State of Georgia is attempting to help meet that demand with several recycling mills, and about 600 mills around the country are recycling paper.

One of Georgia's mills is located in

CHAMPION TREE FARMER C. M. STRIPLING PRESENTED PRESTIGIOUS WISE OWL AWARD

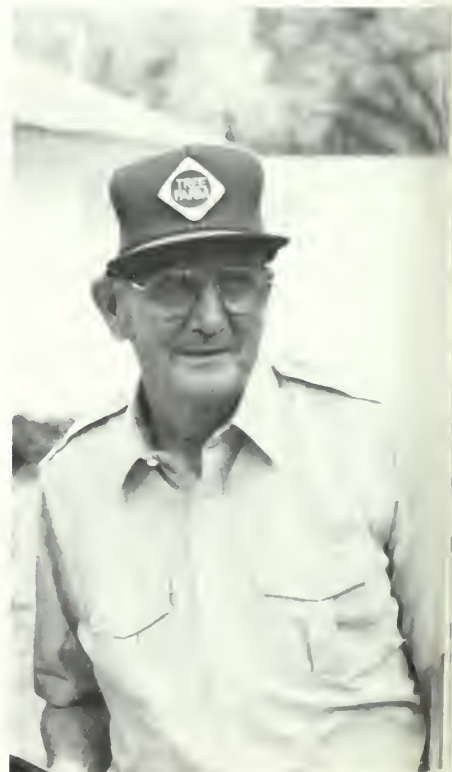
The 1987 National Tree Farmer of the Year, C. M. Stripling of Mitchell County, was presented with the prestigious Wise Owl Award at the Georgia Forestry Association's 1990 annual convention held on Jekyll Island.

The GFA Awards Committee chose Stripling for the coveted award on the basis of his lifetime interest and endeavors in forestry. Stripling was only 19 years old when he started tree farming in 1939, after being forced to return home from college because of high blood pressure. Following a year of "sitting around trying to get better," he was tied up with the futile medical efforts and confinement.

"I don't care if it kills me," he finally told his mother, "I can't be like this anymore. If I die - I die."

On that hot November day in 1939, Stripling went out and planted his first 1,000 seedlings by hand on the family farm near Camilla. He obviously did not die - even though he was warned by medical doctors that such activities would kill him - and he still has the dibble he used to hand plant those trees. The farm now has 800 acres of carefully managed trees that evolved into a national role model.

Stripling's enthusiasm for tree farming has not been altered for half a century. He sees tree farming as a way of preparing for the future. Stripling keeps a daily journal of forestry activities and knows what his land is capable of producing every year until 2010. He continues to refine and maximize forest productivity by planting, replanting,



Dublin and another is under construction in Augusta. The Augusta mill, built by Abitibi, will have an annual capacity of 363,000 tons and is scheduled for completion this fall. The Dublin mill has a 450,000 ton capacity and uses over 500,000 tons of old newsprint a year. In 1986, 17 million tons of waste was recovered for recycling and 14.6 million of it was waste paper and paperboard.

"The Dublin mill gives Georgia a ready source of recycled newsprint," Berry said. "They will sell all they produce."

The Fort Howard Corporation, located in Rincon, recycles more than just newspaper.

"We recycle a full range of paper, office, coded, small quantities of newspaper, phone directories and more," said Mike Vaquer, Public Relations Director for Fort Howard.

Fort Howard, which has been recycling since the 1930's, processes more than one million tons of waste paper per year. For the past 10 to 15 years, they have used nothing but waste paper for raw material.

Vaquer said recycling has brought about "an increased awareness among industrial, institutional and household consumers and a height-

ened awareness to designate different types of paper."

In relation to other countries, this nation's waste of materials is much higher and recovery, through the recycling program, is much lower. The Japanese, with a considerably smaller land area and fewer trees, recover nearly 60 percent of all their newspapers and also buy old newspapers from the United States for that purpose.

"Waste has been a big aspect of the history of U. S. life," Butts said. "In contrast to this, the country of India is very much non-wasteful. An average American uses five to six hundred pounds of paper per year, whereas a person in India may only use two or three pounds per year."

Recycling also brings about many important environmental benefits to the atmosphere, land and forest industry. The EPA found that paper made from recycling creates 74 percent less air pollution and 35 percent less water pollution. Every ton of recycled paper keeps almost 60 pounds of air pollutants out of the atmosphere, and creates an energy saving of 32 to 74 percent.

A 1983 study (Gunn and Hannon) reported that 100 million tons of

wood could be saved each year if all the paper that could be technically and economically recycled was actually processed.

"We haven't reached the crisis stage yet," Butts said. "Trees are a renewable product, but even though there are many trees left, it is not like it used to be. We just cannot keep producing more wood products each year at a greater rate or at the same rate. The recycling of paper will help take some of the pressure off the wood supply."

One ton of paper from recycled materials saves 17 pulp trees, and every ton of office waste paper recycled saves 29 trees. The Georgia Press Association conducted a survey this past year of 75 state newspapers and found that 1,723,885 trees were saved from the 101,405 tons of newspaper recycled.

"Recycling cuts down on waste and improves our efficiency," Rivers said. "This takes pressure off the resource somewhat, while the demand for paper is increasing." The forester made it clear that the amount of paper products salvaged through recycling operations will not noticeably decrease the timber market in Georgia.

hinning, harvesting and experimenting with various species.

However, Stripling's concern for tree farming goes beyond economics and statistics. His reputation as a good steward of the land and overall environmentalist is well known. He has developed a protective rapport concerning the land that influences many of his actions - including tree farming. Some of his feelings are similar to the mystical attitudes of the early American Indians.

Stripling's stewardship of the land is personal. He has made arrangements to prevent his land from being rented after he is gone.

"I have a horror of my land being rented - much less sold," Stripling said. "Land goes to hell when it's rented."

After a lifetime of tree farming, Stripling sums up his feelings like this: "I feel that tree farming is the ultimate in good soil stewardship. When I plant trees, I feel a little bit closer to the Great Being that rules the Universe."



Patrolman Neil Hinegardner and Ranger Wayne Meadows display sections of wood shipped to their Harlem Unit from the 50 states to make a map of the United States. Each state sent a wood sample from their state tree to be custom cut into the shape of their state and fitted into a U. S. map for Commission headquarters in Macon. Meadows (right) and Hinegardner, both cabinet makers, are sizing and planning the various wood sections that will later be laser-cut for the map. Wood species, that arrived in various shapes and sizes, range from soft to so hard that the samples wore down planer blades. The finished map will be approximately 3½ by 3½ feet - the same as the map in background.

LYME DISEASE

(continued from pg. 14)

necticut. One of the strongest forms is public education. In 1989, Wisconsin planned to issue 150,000 brochures on Lyme, with most being sent to physicians. Outdoors, especially in or near wooded areas or tall grass, a person should dress properly. Long-sleeved shirts and long-pants (with cuffs tucked into high socks) are good outdoor measures to take.

Repellents should be used whenever working or recreating in tick infested areas. Repellents such as Permethrin are effective for 24 hours or more but should be applied to the outside of clothing only. Repellents that are safe for application to the skin are effective, but usually do not have more than a few hours residual and must be reapplied after four to six hours. Persons should make a regular check of themselves and their pets when returning from outdoors where ticks are suspected. Inspect clothes and all areas of your body once indoors.

"Check periodically for ticks during the day and before you go to bed," Price said. "If you find ticks on you, make a note of it on a calendar so if symptoms begin within two to 12 days of the find, you will be able to convey the information to your physician."

WOODEN BRIDGE

(continued from pg. 9)

bridges frequently use steel tension rods instead of nails. These rods distribute weight evenly and will not work loose as nails often do in old-style (untreated) wood bridges.

Local officials and other transportation decision makers realize the pressure of being expected to do more and more with less and less money. Since modern society depends upon transportation systems as a foundation of the economy and community life, the wooden bridge initiative is an attractive option - not only financially, but also aesthetic sense.

Concrete and steel cannot begin to compete with the aesthetic beauty of a well designed wooden bridge. Although wood bridges may be used in urban and rural settings, they are (ideal) for rural settings; even then, the benefits could be financial as a tourist attraction.

There is more than research to confirm the durability of wooden bridges. Several existing bridges testify to wood's durability. Maryland's Patuxent River Naval Air Station Bridge, a timber trestle bridge 2,640 feet long, was built in 1952
18/Georgia Forestry/Fall 1990



District winners in the first annual "Top Gun" competition gathered at Commission headquarters in Macon for a showdown on who is actually the best skilled forest firefighter in the entire state. Part of the rigid testing included the contestant's ability to weave a heavy crawler tractor and plow between a row of pylons.

ABBOTT WINS STATE TOP GUN COMPETITION

Forest Patrolman Steve Abbott of the Columbia County Unit, Georgia Forestry Commission, captured the Top Gun championship in a state final

and has no substantial rehabilitation. Ohio had several wooden bridges built in the early 1930s that continue to provide good local transportation.

Important factors in assuring the long-life for wooden bridges include designs to avoid water trapping, using effective and compatible preservatives, and a good inspection program for maintenance.

In essence, constructing a wooden bridge can save time and money. Many wooden bridges can be installed in a fraction of the time needed for steel and concrete bridges. And since timber withstands sun, rain and freezing - bridges can be constructed and repaired in all types of weather.

Georgia's wooden bridge program currently has four more bridges planned that will be located in the counties of Monroe (Middle GA), White and Habersham (North GA), and Johnson (South GA).

As the timber bridge program - and other wood markets - are introduced and expanded, one unique feature of wood remains constant among all structural materials: wood is a renewable resource that can be farmed, whereas alternatives - such as stone and metal and plastic - are all derived from exhaustible mineral resources.

competition held at the Commission headquarters in Macon.

Top Gun, an event to staged annually, was held to determine who is the best forest firefighter in the state. The two-day event included a written test, timber volume estimation, land area measurement, vehicle inspection, and a rigorous truck and tractor obstacle course.

"We're very pleased with the outcome," Training Director Bob Burns said. "The contestants worked real hard, and all of them agreed that it should be an annual event."

Deputy Director David Westmoreland said Top Gun "was very innovative and created a high degree of competitiveness throughout the Commission. No other state to my knowledge has a competition like this."

For winning the event, Abbott received a one step pay raise, a trip to the annual meeting (this year at St. Simons), a trophy and Top Gun belt buckle and hat which are to be worn with the uniform.

Others participating were: Bradley Ridley, District 1; Rickey Wiley, District 2; Jim Gabriel, District 3; Jeff Kenerly, District 4; Tony Wagner, District 5; Charles Henson, District 7; Travis Watson, District 8; Randy Kirksey, District 9; Sammy Mills, District 10; Floyd Knowles, District 11; Nickie Jordan, District 12; and Brian Reese, District 20. Abbott represented District 6.

JAMES (RED) STRANGE IS CLAIMED BY DEATH

James (Red) Strange, widely known across Georgia and throughout the nation for outstanding contributions to forestry, died August 4 after a lingering illness.

Strange, 80, a longtime resident of Decatur and a 1932 graduate of the University of Georgia, became a forest ranger in the U. S. Forest Service in 1933 and retired in 1969 as Associate Director of the Southeastern Region.

During that time he served as a United Nations Forestry Representative to the Government of India. He also served as U. S. AID Consultant to the Government of Costa Rica, and was a U. S. Delegate to the 1st Pan American Congress of Soil Conservation in Brazil. He was a veteran of the U. S. Army Air Corps, during World War II, and was discharged as a Captain.

Most recently, Strange was employed as a Consulting Forester and had worked extensively with the Georgia Forestry Association, the Georgia Forestry Commission, the U. S. Forest Service, and Georgia State University. He is a Georgia Forestry Hall of Fame Honoree.

He was an active member of the University Heights United Methodist Church in Decatur, where he taught Sunday School for 25 years.

He is survived by his wife, Mrs. Mary K. Maddox Strange, of Alpharetta; daughter, Susan Jennings; a sister, Mrs. Malisse Walton; and two granddaughters.

RETIREES REUNION SET

The second annual reunion of retired Georgia Forestry Commission personnel will be held September 28 at the Georgia Forestry Center, according to a planning committee headed by Frank Craven of Macon.

Craven said speakers will address the group on topics of interest to persons in retirement and field questions. He said John Mixon, director of the Commission, will welcome the visitors to the center and a moment of silence will be observed for retirees who have died during the year. An election of officers will be held and a luncheon will be served.

The planning committee, which also includes Orene Duvall of Stone Mountain and Tommy McClendon of Fayetteville, said activities will include a tour of the Commission's recently completed forestry museum.



This team of Georgia teenagers recently competed against 14 other states to win first place in the 11th annual National 4-H Forestry Invitational, a four-day event sponsored by the International Paper Company. They are, top, Lamar Spells, Lake Park, and Kelda Lane, Valdosta. Bottom, Jeff Bennett and Dee Staten, both of Statenville. (Photo by Kaye Dickie, International Paper)

WESTERN FIRE FATALITIES PROMPT SAFETY REMINDER TO GFC PERSONNEL

The eight fatalities that occurred in just two days during the recent battle against raging forest wildfires on the west coast has prompted the Commission to remind Georgia firefighters to abide by all safety rules and never become overconfident while on the fire line.

Six firefighters were killed when they became entrapped in the Tonto National Forest inferno and two were killed the next day on the big California fire when caught in fast moving flames fanned by shifting winds.

Following the accident, the California Department of Forestry and Fire Protection notified crews that fire shelters will not be carried in packs but worn at the waist, something Georgia firefighters have been doing for quite some time.

Wesley Wells, Chief of the Commission's Forest Protection Department, said that in many instances "there is a distinct difference in fire problems that occur in the mountains of California and those that confront us here in our state, but our safety goals are similar."

Wells agreed with the California agency's advice to its firefighters: A

simple concept to remember and share with the crew members is the L.C.E.S. The acronym stands for Lookouts, Communication, Escape Routes and Safety Zones.

PINE DRYING SEMINAR PLANNED FOR OCTOBER

The Southern Yellow Pine High Temperature Lumber Drying Seminar is coming up again this fall, scheduled October 2-3 in the research department auditorium at the Georgia Forestry Commission State Headquarters in Macon.

Instructors will include Julian Beckwith, wood products specialist with the University of Georgia Extension Service, and Gene Wengert, lumber drying specialist with the Virginia Polytechnic Institute Extension Service. The UGA Extension Service sponsors the seminar.

The registration fee is \$85, which covers two hot lunches, a tour of a nearby pine kiln, a certificate of attendance and a copy of "Drying Southern Pine Lumber."

For additional information, contact Beckwith at the UGA Extension Service, Barrow Hall, Athens, GA 30602, or phone (404) 542-3447.

Say Yes To Question Number 3

When Georgia voters step up to the ballot box on November 6 they will have an opportunity to make a decision that will have a positive and long-range effect on the future of the state's economy and environment.

The Conservation Use Amendment -- question number 3 on the state-wide ballot -- will help conserve land for forestry, agricultural, and residential purposes by changing the way certain properties are assessed for taxation. In addition, it will encourage the growth of trees by reversing the effect of recent regulations which discourage forest landowners from replanting trees.

Concerned environmental organizations have united with business and consumer groups, forest landowners and farmers to support passage of the amendment, with efforts spearheaded by the Coalition for a Green Georgia. Among the groups favoring the amendment are the Georgia Forestry Commission, Georgia Wildlife Federation, Wilderness Society, Nature Conservancy, Georgia Citizens Action Association, County Commissioners of Georgia, Georgia Agribusiness Council, Georgia Forestry Association and Georgia Farm Bureau.

"This is not an issue that just concerns timber growers," explained John Mixon, Director of the Georgia Forestry Commission. "It involves all Georgians." He pointed out that Georgia is one of the nation's leading timber growing states and "all our citizens benefit from forestry, an industry that pumps \$10 billion annually into Georgia's economy."

The director cautioned that the current high productivity cannot continue unless tree growers replant after harvesting their timber. "Many are now reluctant to replant," he said, "because of the present tax situation." Mixon said a "yes" vote on Question 3 would restore the incentive for many landowners to again engage in reforestation.

"Our goal is to encourage voters to vote yes on number three, the Conservation Use Amendment," said Rudy

In the past two years the number of trees planted in Georgia diminished by half, from 603,000 acres in 1988 to 338,000 acres this year. In addition, during an eight-year period ending last year, farmland decreased from seven million to five million acres.

Underwood, chairman of the coalition and legislative director of the Georgia Farm Bureau.

"Inflated ad valorem property assessments and new state regulations requiring annual assessments on timber are driving many forest landowners and farmers out of business," said Bob Izlar, treasurer of the coalition and executive director of the Georgia Forestry Association.

In the past two years the number of trees planted in Georgia diminished by half, from 603,000 acres in 1988 to 338,000 acres this year. In addition, during an eight-year period ending last year, farmland decreased from seven million to five million acres.

While a number of factors have contributed to these declines, the Conservation Use Amendment addresses two major problems which can help prevent further losses.

The first is Georgia's system of ad valorem property assessment. Presently, assessments for farms, forests and some residential property may be

"If Georgia continues to lose trees and farmland at the current rate, our environment will suffer. Our state's economy also will be affected. We need Georgia voters to voice their support for conserving the state's forests and farmland..."

artificially inflated due to nearby commercial developments, such as shopping centers and highways. Land is often valued - based on a property's potential commercial use, not its actual use.

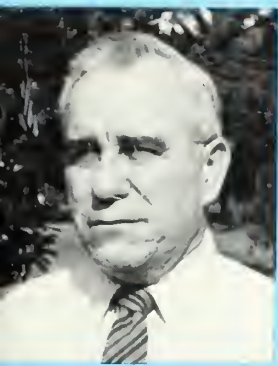
The Conservation Use Amendment will encourage the conservation of qualifying property (limited to 2,000 acres) by assessing land based on its current, productive use.

The method of timber crop assessment by counties is the second problem the amendment will correct. Like all property owners, forest landowners are subject to annual ad valorem property assessments. Due to the recently-imposed state regulations, timber growing on their property also is assessed annually, even though it won't be harvested or produce income for decades.

"The combined rates often are exorbitant and discourage tree farmers from replanting," said Izlar. If the Conservation Use Amendment passes, crop assessments will be levied only when timber is harvested, while the underlying property will continue to be assessed every year.

Leading ecologists and academicians have issued a statement in support of the Conservation Use Amendment which predicts serious consequences if the annual timber crop assessments continue. One supporting ecologist, Dr. Eugene P. Odum, professor emeritus of the University of Georgia Institute of Ecology, commented, "The new system of taxing timber crops separately will have the disastrous ecological effect of deforestation, which increases free carbon in the environment, accelerates the greenhouse effect, alters weather patterns and destroys wildlife habitats."

Underwood noted that "if Georgia continues to lose trees and farmland at the current rate, our environment will suffer. Our state's economy also will be affected. We need Georgia voters to voice their support for conserving the state's forests and farmland. We need everyone's help to keep Georgia green."



LONG



SWINDELL



LANIER

VETERAN FORESTERS RETIRE

Three veteran foresters - each having concluded distinguished careers in management positions - recently retired from the Commission.

Jack Long, Associate Chief of the Forest Protection Department, said farewell to fellow employees and their friends at a Macon dinner in his honor and Henry Swindell, Field Supervisor, was later feted in that city at a retirement party given by his associates. Jerry Lanier, long time District Forester of the Statesboro District, was honored at a festive dinner in Statesboro.

Long was born in Jacksonville, Fla., but his family moved soon afterward to Long County in Georgia and later to Athens, where he graduated from high school. He came with the Clarke County Forestry Unit in 1955 as a part-time forest patrolman while a student at the University of Georgia. After his graduation from the School of Forest Resources, UGA, and six months in the military, he was named ranger of the Macon County Unit. He later became assistant district forester in the Waycross District. He was serving as assistant district forester in the Newnan District when he was transferred to the Athens headquarters in Macon to join the fire control staff.

Long is known for the contribution made in helping build a superior radio communications system in the Commission.

Long, who retired three years ago at the rank of Lieutenant Colonel after 30 years of service in the National Guard and U. S. Army Reserves, is married to the former Miss Yvonne Bell of Gainesville and they have a daughter, Audrey Hutcherson of Macon, and a son, Alan, of Atlanta. The couple is

active in Martha Bowman Memorial United Methodist Church in Macon.

Henry A. Swindell, who has served as Field Supervisor for the northern part of the state since 1985, retired after 34 years of service to the Commission.

Swindell is a native of Ludowici, where he graduated as Salutatorian of Ludowici High. He then attended the University of Georgia where he obtained a B. S. Degree in forestry.

He began his career as a reforestation assistant at the Horseshoe Bend Nursery in 1958, and after a six month stint of active duty with the U. S. Army, he moved to the Herty Nursery. In 1960, he was assigned as forester in fire suppression and forest management activities. In 1961, Swindell was married to Ms. Stella Maddox of Eatonton. He became Area Forester in Hinesville in 1969 and moved to Griffin as District Forester in 1972, where he remained for 10 years.

Swindell has been in Macon since 1982 and has served on the Forest Protection Department staff and as Associate Chief of Forest Protection Department prior to his promotion to Field Supervisor.

Swindell is a licensed real estate agent, a member of the Georgia Forestry Association, the University of Georgia Alumni Steering Committee, the Society of American Foresters, the Kiwanis Club and served as past president of the Hinesville Jaycees.

Lanier, a native of Candler County, graduated from Metter High School and studied two years at Abraham Baldwin Agricultural College and two

years at the University of GA to earn his degree in forestry. He came with the Commission in 1958 as assistant ranger of the Emanuel County Unit and was named assistant district forester in the Statesboro District in 1960. He became district forester in 1969.

The forester, who has served six years in the Air National Guard, is a member of the Georgia Forestry Association, Georgia Farm Bureau and the Savannah Area Forestry Club. He is married to the former Miss Phebia Rocker of Candler County and they have two children, Sonya Durrence of Reidsville and Jerry (Reggie) of Washington.

His son also attended Metter High, ABAC and UGA and holds a degree in forestry. He is a forester in the Washington District office.

The retiring district forester, who said he has "thoroughly enjoyed" his 32 years of service with the Commission, recalls that he started school at age four by "tagging along" with his older brother to a country school. A tolerant teacher let him study along with the students and by age 16, he had his high school diploma. He graduated from UGA at 20.

Lanier and his wife are members of the Pulaski Baptist Church, where he serves as a deacon and a Sunday School teacher.

FORECAST GOOD FOR AUTUMN LEAF SHOW

It will soon be time for many Georgians to make their annual trek to the mountains of North Georgia to view the glorious spectrum of colors that autumn brings to the hardwood forests. Gainesville District Forester David McClain said weather conditions are favorable at this time to produce "a good leaf color this fall."

He said "scattered showers have prevailed throughout most of the mountainous area and if this continues, there will be a fine display of color." Hot, dry weather in several previous seasons have caused the leaves to be less than spectacular.

Although people often credit a mischievous Jack Frost for the color change, the weather has nothing to do with it, according to the American Forest Council.

Each tree has its own fall color bound up in the chemical composition of the sap, which provides the "instructions" on what color to turn.

LANDOWNERS URGED TO ORDER SEEDLINGS

Orders are now being accepted for pine and other seedlings for the forthcoming planting season, according to Johnny Branan, Chief of the Commission's Reforestation Department.

Branan said the nurseries this year will produce approximately 75 million seedlings and pine species will be available for planting in early November. He said they will be delivered weekly to Commission County Units from December through February.

Applications may be obtained from: Georgia Forestry Commission County

Units, County Extension Agents, Soil Conservation Service or Agricultural Stabilization and Conservation Service offices. Applications should be mailed to: Georgia Forestry Commission, P. O. Box 819, Macon, Georgia 31298-4599.

The reforestation chief emphasized that only healthy, vigorous seedlings are shipped from the Commission's nurseries, with special care exercised in lifting, grading and packaging. He also urges purchasers to practice careful handling and proper planting procedures to insure a good survival rate.

All orders of 10,000 or less must be accompanied by total payment, while orders of more than 10,000 require a 10 percent deposit. Landowners will be invoiced 30 days prior to delivery, and all guaranteed orders must be paid for in full by December 31. No refund of deposit or seedling prepayments will be issued unless cancelled by December 31.

Landowners will be notified of shipping dates prior to shipment. Proof of purchase must be presented at time of seedling pickup, and no seedling deliveries will be made by state trucks after March 1. The seedlings cannot be returned after delivery.

Georgia Forestry Commission seedlings are grown from certified seed that have been carefully selected and developed for each geographic region of Georgia.

A brochure containing a complete price list of all species, planting instructions and general information is now available at all Commission district offices and county units.

FULMER IS NAMED FIELD SUPERVISOR

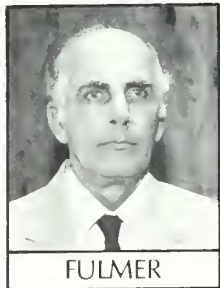
Preston Fulmer, who has been District Forester in Newnan for the past 18 years, is returning to replace the retired Henry Swindell as Field Supervisor for the northern part of the state. Fulmer, a Macon native, is a 1956 graduate of Lanier high school and received a B. S. Degree in Forestry from the University of Georgia.

Fulmer began his career with the Commission in 1961 at Waycross. He has served as Assistant Ranger in Valdosta, Forest Technician in Camilla and Area Forester and Assistant District Forester in Early County.

While in Newnan, Fulmer coordinated the Commission's role in the Land-Use and Forest Management Field Day held in 1986 and again in 1989. The program, held near Griffin showed private landowners ways to increase the value of their forests and lands. The wide acclaimed field days featured specific demonstrations on land-use and forest management techniques.

Fulmer served in the U. S. Army and is a member of the Society of American Foresters, the First Baptist Church of Newnan, and the Farm Bureau.

His wife, Teena, is also from Macon, and they have three children, Preston, Jr., Karen and Julie.



FULMER



GODWIN



GODFREY

JOHN GODWIN, who came with the Commission in 1981 and has served as patrolman in Dougherty, Calhoun and Early Counties, has been named ranger of the Early County Unit. A native of Quincy, Florida, Godwin is a graduate of Dougherty High School and holds a degree in computer science technology from ABAC. The new ranger and his wife, Alesia, have three children...BILLY GODFREY, a native of Warner Robins who attended Northside High School in that city, has been named staff photographer of the Commission and assigned to the I&E Department. Godfrey previously served as staff photographer for the Daily Sun, Warner Robins newspaper, and was later assistant manager of Coke's Camera Center in Macon. He has also worked as assistant manager of Ken Krakov Studios in Macon and has been engaged in freelance work.

DAN GARY WILL HEAD STATESBORO DISTRICT

Dan Gary, a native of Tennessee who came with the Commission in 1985 as a management forester in the



GARY

Tifton District has been named district forester of the Statesboro District to succeed Jerry Lanier who recently retired.

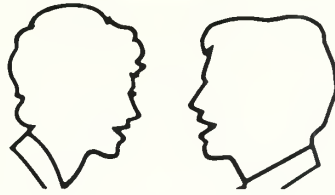
Forester Gary who graduated from Bellview

High School in Nashville and earned a degree in forestry at the University of Tennessee, also worked as a reforestation specialist during his time with the Tifton office.

The new district forester is married to the former Miss Deede Griffin of Albany and they have two children, Kayla and Jarod. The family attends the Episcopal Church.



PEOPLE



In The News

RANDY JOHNSON, ranger of the Early County Unit since 1982, has been named District Ranger of the Camilla District to succeed Jerry Johnson, who was transferred to the Stone Mountain



JOHNSON



MULKEY

District. The new district ranger, a native of Albany who began his career with the Commission as a patrolman in Dougherty County, and wife, Carole, are active in the Baptist Church... A supper was held in Griffin recently to honor KAREN MULKEY who has retired after serving 35 years as secretary in the Newnan District office. She started work as secretary soon after graduation from high school in Newnan in 1955. A member of the Peachtree City Church of God, she retired secretary has two sons, Kent and Joe, and three grandchildren. She said retirement is giving her the oppor-



McCLENDON



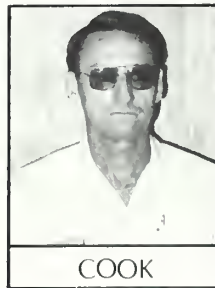
STEVENSON

unity to spend time with grandchildren and to do some traveling...Commission friends and others honored Ranger THOMAS McCLENDON of Fayette Co. with a luncheon recently as he retired after 34½ years of service. The veteran ranger a native of Henry County, came with the Commission when he was 19 and served in Henry County and South Fulton Units before going with the Fayette

Unit in 1962. He is married to the former Miss Louise Anderson of Jesup and they have three children, David, Cathy and Mark, and six grandchildren. The couple is active in Grace Baptist Church in Fayetteville...FRANCES STEVENSON was honored recently at a retirement party at Little Ocmulgee State Park as she concluded a 34-year career with the Commission as secretary of the McRae District. A native of Milan, she graduated from the local high school and worked three years as a bookkeeper for a Milan company before coming with the Commission in 1956. The retired secretary and her husband, Mitch, are members of



DOZIER



COOK

the Rockwell Baptist Church...Forester ALAN DOZIER has been promoted to Associate Chief of the Protection Department to fill the vacancy left by the recent retirement of Jack Long. Dozier has been with the Commission since 1980, and has held positions as Forester, Forest Patrolman and Forest Ranger in three different districts. He and his wife, Arlene, moved to Macon in 1985 when Dozier was promoted to Forest Specialist. A graduate of R. L. Osborne High in Smyrna, Dozier attended West Georgia College and received a B. S. in Forest Resources from the University of Georgia in 1977...EARL COOK, District Ranger of the Statesboro District, has retired after 33 years of service with the Commission. A native of Pulaski and a graduate of Metter High School, Cook came with the Commission as a seasonal towerman in 1957 and was soon hired as a patrolman in the Candler County Unit. He later became ranger and

served in that position until he was named district ranger in 1984. Cook and his wife, Nancy, have two daughters and two grandchildren. Commission personnel and other friends honored the ranger with a retirement dinner at the local Holiday Inn...



GAINES



COX

MONROE GAINES, ranger of the Berrien County Unit since 1984, has been named district ranger of the Statesboro District following the retirement of Earl Cook. Gaines, a native of Fitzgerald and a graduate of Fitzgerald High School, came with the Commission in 1980 as patrolman in the unit at Nashville. The ranger and his wife, Kathryn, have two children. Robert and Anna Kate, and the family is active in the Baptist Church...JOHN COX, patrolman in the Seminole County Unit since coming with the Commission in 1987, has been named Ranger of the Worth County Unit to succeed Charles Thomas, who was transferred to the Flint River Nursery. Cox, a native of Baconton and a graduate of Westwood Academy in Camilla, holds an associate degree in forestry from Abraham Baldwin Agricultural College. The new ranger and his wife, Loree, have an infant daughter and the couple is active in the Baptist Church...A festive dinner was held August 31 in Milledgeville to mark the retirement of Secretary MARY JO COLEMAN of the Milledgeville District. A native of Baldwin County and a graduate of Peabody High School, the district secretary began work with the Commission in the fall of 1956. She said she has enjoyed working the 34 years with personnel in the district. Coleman has a daughter, Wanda, and two grandchildren. The secretary and her husband, Joel, live in Milledgeville.



COLEMAN



LEAF RAKING TIME!

He looks contented as he rakes the Autumn leaves beneath a healthy, suburban hardwood. Could he be considering the many benefits offered by urban trees? Benefits that are being appreciated more and more as public concern increases over beautifying and preserving the natural environment.

Besides offering a natural beauty to urban environments trees can increase residential property values up to 15 percent. Wooded settings demand greater

lease revenue. Urban trees also reduce noise pollution and create ecosystems for plant and animal life.

And for the homeowner as well as the office complex, trees stand on the job 24 hours

day in the summer to reduce the energy costs of air conditioning as much as 30 percent. When winter comes, most of these same trees politely shed the leaves to let warming sunlight through. Many homeowners and managers of office and industrial parks are now using leaves as compost to enrich the soil.

The Georgia Forestry Commission is known for the wide range of services it provides the rural forest land, but it is also a pioneer in the establishment of an urban

forestry program. Homeowners in cities and towns across the state have benefited in recent years from assistance given in the care of lawn trees. Municipalities have taken advantage of the Tree Care USA program under the Commission's sponsorship.

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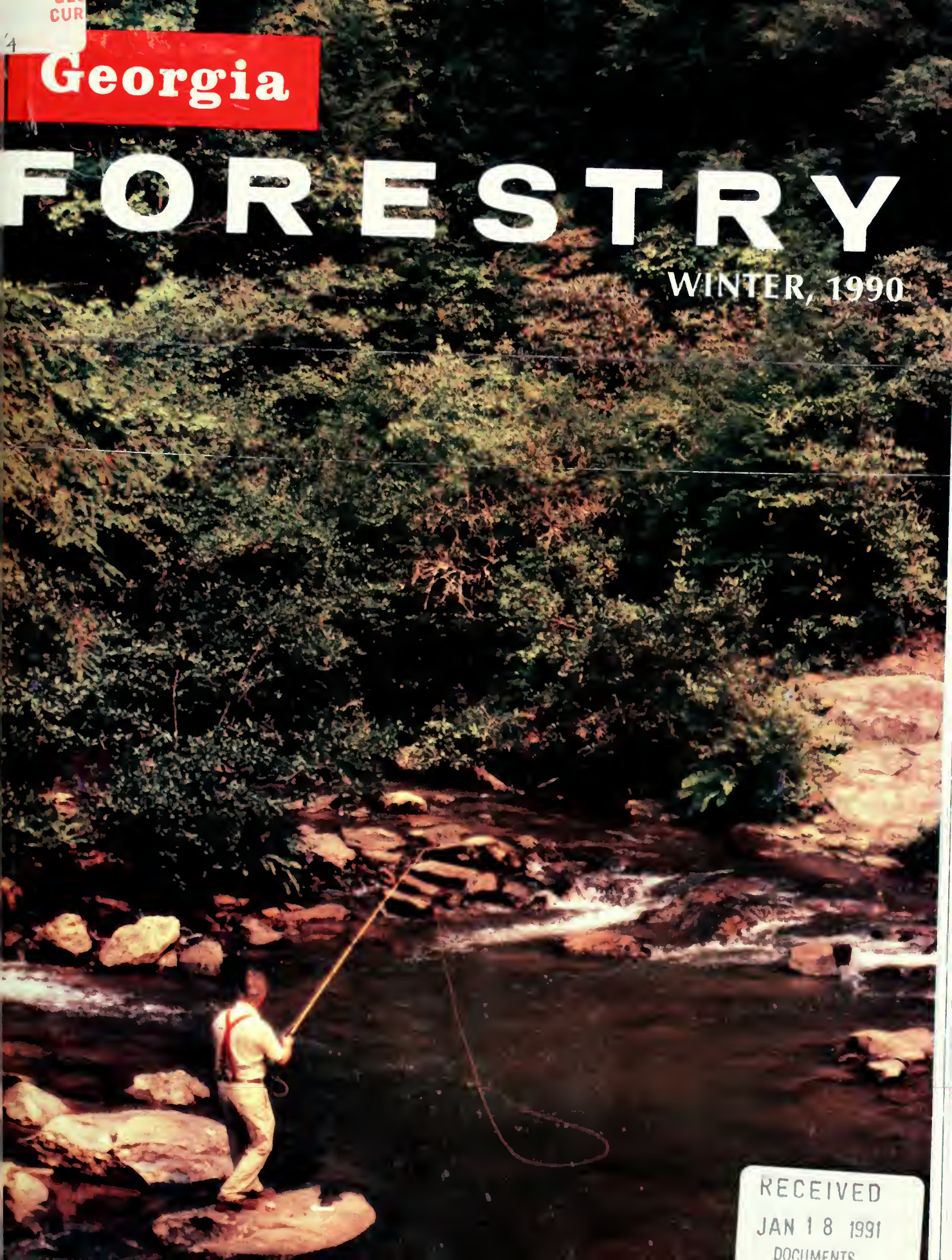
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The Miss Liberty who stands proudly in the heart of McRae has a 60-pound head carved from a gum stump. There is plywood in parts of her body and the base of the 32-foot statue is made of cypress and pine from the forests of Middle Georgia. The statue, with carving attributed to Randy Yawn, a local hospital technician, is a replica one-tenth the size of the Statue of Liberty in New York harbor. The statue, a project of the Telfair-McRae Lions Club, has become a favorite photo subject for tourists.

ON THE COVER - Trout fisherman fly casts into tree-shrouded waters of North Georgia mountain stream. Although such wilderness type areas have dwindled in Georgia, concentrated efforts are underway to preserve the natural beauty of these forested habitats for fish and wildlife.

Photo By Bill Edwards



Cathy Black, Commission urban forester, is shown in before and after photos of pine planted tract at Augusta's Gracewood State Hospital. Early photo shows Black examining trees shortly after original planting. Current photo shows trees at same location.

GRACEWOOD PLANTING PROVIDES FOR VALUABLE RESEARCH PROJECTS

It just goes to show what a little observation and foresight can accomplish!

Several years ago, Richmond County Ranger Harold Smith (retired) was driving Commission Director John Mixon to the local airport. Smith mentioned that Augusta's Gracewood State Hospital had an unused tract of land that would be ideal for planting pines. Mixon postponed his trip to the airport and had Smith drive him to the hospital to talk with administrators.

Shortly after the discussion, the first trees were planted by Commission personnel at Gracewood. The original planting was in February 1983. Virtually all personnel in District 6 participated in planting 301,290 trees on 415 acres. Personnel at the Richmond County Unit recall as many as five tractors

going at one time as the planting processed.

Cathy Black, urban forester for the Richmond County Unit who has been working with the Gracewood tract for several years, described it as "a diversified project that has become progressive and valuable in many ways." Her reference ranges from potential commercial value of the timber to continuing research projects.

"One area was selected for an operational spraying demonstration in

415 IDLE ACRES TURNED INTO BEAUTIFUL FOREST

1987," Black said. "This was the first use of a spraying unit developed by

the Georgia Forestry Commission for applying herbicides to pasture and cropland as site preparation."

The research area was sprayed on ten foot centers by spraying three bands at a time; each band was four feet wide. The herbicide used (glyphosate) was applied at a rate of five quarts per acre. The spraying treatment was followed by a burn, before the next frost.

"The result was clean strips - which had been sprayed - alternating with partially burned strips," Black said. "The area was subsequently planted in Livingston Parrish Loblolly Pine during late March and early February."

Black pointed out that some of the areas on this research site were not sprayed - so comparisons and evaluations could be established.

FINDINGS CONTINUE

According to management plan guidelines, a second area was treated with herbicides during the summer of 1987 for more evaluations. This area consisted of 17.2 acres of Improved Loblolly planted during the winter of 1987.

Black said the most interesting phase of the Gracewood operation remains the evaluation of these herbicide plots, with numerous findings still surfacing in the continuing observation and research.

Since most of the Gracewood plantation is planted in coastal bermuda with forestry managed by the Commission, it provided an excellent opportunity for a research site. Participants in the research included the Commission, University of Georgia and U. S. Forest Service.

Research, cultivation, and care of the tract continues to progress with District 6 Units devoting time to regular maintenance. Foresters in the district are also now using the tract as a training site for plowing fire suppression breaks. In addition to other activities, the Commission's Research Department has designated the Gracewood site as the location of a new wooden bridge to be used for demonstration purposes.

"All things considered, I think the Gracewood project is turning out to be beneficial for all concerned," Black said.

The Commission Director's delayed departure from the airport on that day several years ago has resulted in many dividends.



Bill Carmichael, left, looks on as daughter Lisa and her grandfather, James Carmichael, check pines grown on their Emanuel County property. Below, Lisa, who wants to be a forester, measures and identifies trees.

FORESTRY IS A FAMILY AFFAIR

Good forestry often bridges generations.

The Carmichaels of Emanuel County - father, son and granddaughter - can attest to that and so can Paul Manners and son, Phil, who work together in managing their forested acreage up in Franklin County.

James Carmichael and his son, Bill, manage almost 2,000 acres of forests in their South Georgia county and the Manners, who live in Atlanta, take pride in caring for some 600 acres of woodlands in North Georgia.

The Carmichaels are so engrossed in their forest that both gave up intended careers to work with their trees. The father, an attorney, gave up his law practice and clients in favor of trees and Bill, who earned a degree in criminal justice, finds it more stimulating to be out in the pines than down at the courthouse. A representative of a third generation of the family figures prominently in the future management of the forest resources; Bill's 14-

year-old daughter, Lisa, has captured top honors in local and district 4-H forestry projects and looks forward to the day when she can attend college and major in forestry.



"When I was in school," Lisa's father said, "I won a savings bond and a thousand seedlings in my project and now the five acres where I planted the trees has become my daughter's management plot." When her father and grandfather take to the woods to check growth, firebreaks and game food plots, Lisa is usually there to make it a threesome and to test her skills in tree identification and measurement.

The senior Carmichael said his mother planted slash pine on about 10 acres of the family property back in 1935, a time when reforestation in Georgia was practically unknown. It was a time when Emanuel County depended on a row-crop economy and timber was of little value. By 1960, however, Carmichael thinned 100 pines his mother had planted during the Depression and in the mid-1960s he harvested some fine logs from the planting.

The landowner said more than 9

percent of their 2,000 acres is in trees and they do considerable selective thinning and sell some pulpwood, "but we don't believe in clear cutting," he said. "It's okay for industry, but it's not for us. We don't cut any tree under 14 inches DBH."

EMANUEL UNIT PRAISED

The owners keep woods roads and trails in good condition in the event fire fighting equipment needs to move into their forests and both father and son have high praise for Ranger Donnie Price and his personnel at the Emanuel County Forestry Unit for attending to fire suppression, break plowing and assistance in prescribed burning and other services.

Bill Carmichael recalls "one super hot June day when we could have had a terrible loss if it had not been for the forest unit." He said fire was burning fiercely along a dry creek bed and was about to break out and sweep up a hill and into a large stand of timber. "The unit was on the job just in time to save us that day and we are grateful," he said. Ranger Price also remembers that unusually sultry summer day. "We rushed our water truck out there just in time...another five minutes and there would have been no stopping that fire," he commented.

The Carmichaels have had very few fire problems and modest timber loss due to beetle infestation, but the owners said they were beginning to spot some scattered damage in the past few days. One of their most unusual problems, however, has been the theft of pine straw from their land. They have had to take four persons to court for stealing straw, although some were given a warning when apprehended a first time. They received some income from straw, however, by contracting with a reliable dealer three years ago to collect the material from selected sites from a 500-acre area. His careful raking yielded 13,000 bales of straw.

FATHER TEACHES DAUGHTER

The Carmichaels plant food plots on their property and allow relatives and some friends to hunt on the property, but none of their land is leased to hunting clubs. Bill works part-time with United Parcel Service and is active in

landowner Phil Manners, left, and FC Forester Bob McMurry examine rapidly growing pine stand.

Many Georgia families realize that tree growing can be a long term investment - an enterprise that bridges generations. The Carmichaels and the Manners are good examples of families who plan well for the present and the future.

the Swainsboro United Methodist Church, finds time to hunt and daughter Lisa often joins him in the woods. "I even brought her a camouflaged suit the other day," he said. Lisa and her twin sister, Beth, are straight A students and their appearances are alike, but that's about where the similarity ends, according to a proud father who expresses great love for both young daughters. "Lisa loves the outdoors and wants to become a professional forester, while Beth will

probably study home economics or become a teacher." Carmichael also has a degree in forest technology from Abraham Baldwin Agricultural College and Lisa is already a forester to some extent under his influence and tutorage.

Ranger Price views the Carmichaels as "ideal landowners." He said "if all the landowners in our county lived up to the principles of stewardship as they do, we would lead the entire state in outstanding forests."



Commission Forester Bob McMurry and Consultant Forester Walter Fox agree that it would be difficult to find "absentee" forest landowners who are more enthusiastic and cooperative than Paul and Phil Manners. The father and son are financial investment counselors in Atlanta during the business week, but when they have time on weekends and holidays to visit their Franklin County holdings some 70 miles from the city, they seek and follow the advice of the professional
(continued on page 15)





Joseph Edwards of Mitchell County has revived the craft of building handsome horse-drawn vehicles. Here he stands before a surrey recently completed in his shop.

CARRIAGE BUILDER TURNS BACK THE CLOCK

By Howard Bennett

When Joseph Edwards admired a toy in a store window or in the Sears Roebuck catalog and asked his father to buy it, he always got the same answer: "If you want it, find a way to make it."

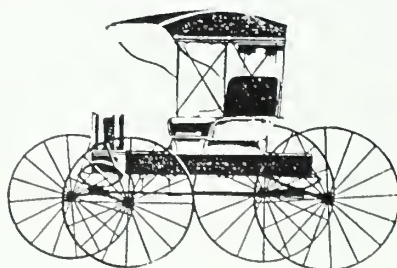
The boy did just that!

He grew up in the rural community of Greeno in Mitchell County and had little knowledge and scant resources for building his own playthings, but he used his father's limited tools and the plentiful pine wood that grew on the farm to make somewhat reasonable facsimiles of the toys he had seen.

Today, Edwards is in his fifties and in a sense he can still be regarded as a toy maker, but the toys he now manufactures are big, beautiful and expensive; they recapture a romantic era of

transportation in America's past. He builds horse-drawn vehicles, including carriages, buggies, buckboards, surreys and stage coaches.

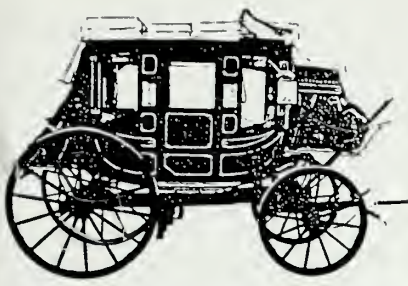
Pieces of carefully selected wood go into the hand-crafted conveyances that Edwards turns out in his shop in the Putney neighborhood about ten miles



Doctors Buggy

south of Albany and he spares no detail in making his product as authentic as possible. Although he had no formal training in engineering, his tireless experimentation with various woods and improvised tools, and the pursuit of a childhood dream has led him to his unusual enterprise of reproducing yesterdays' quaint and graceful vehicles.

While most teenagers long for an automobile of their own, Edwards said he dreamed of owning a beautiful horse and fine buggy. When that was impossible to achieve, he set about making a miniature buggy to be pulled by a goat. Without benefit of plans or guidance, he designed and made each piece for the vehicle and when it was finally finished, he knew what he had



Concord Coach

to do: he would go into the business of manufacturing the graceful horse-drawn vehicles of a bygone day.

Edwards soon found that blueprints, sketches, models, specifications or instructional literature for recreating the vehicles were difficult to find. When the automobile began to replace the carriage around the turn of the century, manufacturing plants began to close and by 1920 the industry had become almost extinct. There were almost 700 manufacturing plants across the country when the industry enjoyed its peak in the 1890s and several plants in Barnesville and other towns in Georgia were among them. Unfortunately, when the last of the major shops closed, manuals and literature pertaining to the craft were destroyed or forgotten.

By studying old magazine photographs, illustrations on calendars, scrapbooks and histories, Edwards managed to gain some information but these sources offered little detail on construction and he had to do considerable drafting to come up with working plans. He also had to determine what woods to use to give his vehicles strength, durability and beauty. The wood in most of the old carriages now in museums is as solid today as it was when they were built and Edwards realized that his material would have to be of equal quality if his vehicles were to be faithful reproductions; his vehicles sell for up to \$20,000 and he wants his customers to enjoy them for many years and then to pass them on to another generation.

"The selection and treatment of wood is very important in the work I do," explained Edwards. "Each species used is from lumber that is at least two years old and my wood is sprayed with a mixture of linseed oil and mineral

Gene Haviland and son, Thomas, work on the hub of a wooden wheel that will go on a wagon being built in the shop.

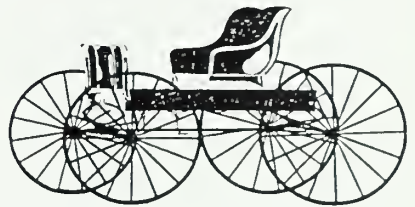
sprits until it is thoroughly soaked." After this process to seal and preserve the wood is completed, it is set aside for four to five weeks to season before it is sanded, he said.

The wheels and shafts of his vehicles are hickory, sturdy axles are made of red oak, rounded fenders are made of white oak because of its flexibility, much of the molding comes from basswood and the seats are pine. The shop is equipped with a lathe, drill press, band saw and other modern power tools, but Edwards also has custom jigs and special tools of his own invention to shape many of the intricately curved wooden pieces and metal parts that go into his productions.

Edwards and his two employees, Gene Haviland and his son, Thomas, are kept busy taking care of orders from Georgians and buyers from other states. Sales have been made in Montana, Arizona, Kansas, Mississippi and Texas. About two years ago, Atlanta's Ted Turner sent the shambles of a fine English carriage to Edwards for restoration and the expert builder and the Havilands fully restored a "pile of junk" to a thing of rare beauty and the cable TV mogul was highly pleased with their work.

Edwards sells an elaborate Victorian carriage, the type shown in several scenes in the movie, *Gone with the Wind*, for \$10,000. A trim little Doctor's Buggy, the kind that was used by "Doc Adams" in television's *Gunsmoke* series, is priced at \$4,600. His fancy

Considerable research and a sense of history, combined with fine workmanship with choice woods from the state's forests, has turned an ancient craft into a going business for an enterprising South Georgian.



Runabout

surreys, reminiscent of the song "Surrey With the Fringe on Top," from the Broadway musical "Oklahoma" several years ago, goes for \$7,850.

The builder said he visited the well





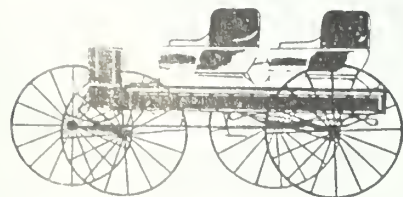
Buckboard

known "Dutch Country" of Pennsylvania where the Amish, a religious faith, continues to use the old-fashioned buggy as their mode of transportation. He said he didn't learn any secrets that would benefit his craft, but he did learn that "people up there prefer our wood to theirs as timber from Georgia and the South is far superior."

The carriage builder estimates that wood represents at least 85 percent of the materials that go into his vehicles and he said it is "all Georgia grown," with the exception of the wheels and shafts. The wheels are purchased from a specialty manufacturer, as it would be too time consuming to build them in his own shop. Seats on his vehicles are upholstered in marine naugahyde because of the exposure to the weather in the open conveyances, but if the customer requests genuine leather, which comes at a premium, Edwards said he will gladly accommodate him by using the real thing.

Just as Henry Ford looked to the future as he began building the "horseless carriage," Edwards looks back to the past in recreating the horse-drawn vehicle. He points out that terms applied to the modern automobile have been carried over from the "horse and buggy days," including fender, dashboard, and floorboard. (Although the word "horsepower" is often believed to have come from that era, it is said to have been first adopted by James Watt, inventor of the steam engine).

Unlike Ford, who limited the color of his Motel T Fords to black, Edwards gives his customers the option of choosing from many colors. As many as five coats of paint,



Spring Wagon

including the primer, are applied to the vehicle, and when the final coat of quality enamel is dry, Haviland has the exacting task of painting a fine pinstripe on the body, shaft and wheel spokes.

Edwards also specializes in elaborate hunting wagons, long vehicles with three seats - one for the driver and two double seats for the hunters or other passengers. The wagon features built-in cages for dogs.

Several of the attractive hunting wagons, usually painted dark green with red wheels before they leave the shop, have been sold to plantations. They sell for \$20,000.

The little shop happens to be located between two diverse roads: one is a busy four-lane highway laden with today's sleek vehicles that have evolved from Ford's horseless carriage; the other is a dusty old stagecoach route once heavily traveled by the buckboards, wagons, surreys and other vehicles now proudly re-created by the Edwards' Horse-Drawn Buggy Works.

The boyhood dream of Joseph Edwards, master carriage builder, has been fulfilled.

Landmark Barnesville Hardware, a mellowed brick building on the corner of Barnesville's Main Street and old U. S. Highway 41, is a reminder of the days when the Middle Georgia town was a bustling buggy manufacturing center.

The building once served as showroom for the Smith Buggy Company. It has four sets of double doors that were necessary for placing the vehicles on display.

The industry flourished for more than 50 years, starting in the 1870's and at one time more than 750 people in the town were working in factories to turn out the type of buggy Edwards now custom builds in his shop in Mitchell County. During the peak of the industry, one Barnesville plant manufactured more than 9,000 buggies in a single year.

The town commemorates the important era in its history each September by staging Buggy Days, a week-long celebration.

UNIFORM FIREWOOD MEASUREMENT SET BY AG DEPARTMENT

Firewood consumers and firewood sellers will benefit this winter from uniform measurement standards enforced by the Georgia Department of Agriculture, the state agency that regulates firewood sales.

There has been considerable confusion in the past among buyers, as well as some vendors, as to the amount of wood contained in a cord and the species of wood involved in a sale. Department officials point out that now wood of any type sold as fuel for fireplaces or stoves must be sold or advertised by the cord, or fraction of a cord, according to regulations administered by the department's Weights and Measures Division.

A cord is defined as 128 cubic feet of wood, stacked in a line or row, with individual pieces touching and stacked in a compact manner. The cord can be four feet high, four feet wide and eight feet long, or any combination of these measurements which add up to 128 cubic feet.

There are no uniform standards for such terms as face cord, rack, pile or truckload, which is why these terms are prohibited when advertising or offering wood for sale.

Many supermarkets and convenience stores now offer firewood for sale in quantities smaller than a cord. The department also regulates these sales and requires firewood to be bundled as a fraction of a cord, or by weight and count. The measurements are required to be clearly labeled on the packaging so that the customer knows the exact amount of wood he or she is buying.

Besides regulating measurement, department rules require that firewood for sale must be designated with 10 percent accuracy as to the type of species.





400 AUGUSTA FLOOD VICTIMS RESCUED BY COMMISSION UNIT

Area Suffers Worst Flood Since 1908

The most dangerous flood conditions the Augusta area has experienced since 1908 resulted in the Forestry Commission's Columbia County Unit being recruited by Civil Defense to assist in rescue operations. The flood followed more than 12 inches of rain dumped on the county in 24 hours by an inland-moving tropical depression.

Commission personnel engaged in emergency operations estimate they rescued approximately 400 people.

"There's no way to really know what it was like without being there," said

Patrolman Rolando Moreno, a firefighter with the Columbia Unit for the past six years. Moreno was assisted in the rescue operation by Patrolmen Gary McFerrin and Ray Turman.

Ranger Jesse Townsend worked from the operation's Command Post and spent the entire day transporting rescue boats to various sites throughout the county. Separated from the Unit's other members, Townsend spent much of the day on the Savannah River. He loaded boats provided by volunteers on a Commission truck.

Patrolmen Moreno, McFerrin and Turman used the remaining Commission flatbed trucks - already loaded with rescue boats - to work emergency rescue areas.

Since Commission personnel knew the assigned areas well from past firefighting efforts, the big transport trucks traveled effectively through the flooded areas. Many of the roads were impassable, so routes had to be carefully selected. Much of the low-lying areas, laced with creeks that were now overflowing, had become a ser-

(continued on page 20)





Steve Abbott, a patrolman with the Columbia County Forestry Unit, displays the Commission's Top Gun Award after winning state finals in Macon. District winners throughout the state competed in the finals to determine the Commission's best firefighter. Competitive events varied from land measurement to an obstacle course.

TOP GUN ALWAYS WANTED TO BE IN FORESTRY

Patrolman Steve Abbott (not to be confused with Tom Cruise) captured the Commission's Top Gun State Championship during two-day finals held at Macon headquarters to determine the best forest firefighter in the state.

Abbott, a member of the Columbia County Unit for five years, took the Top Gun title with an impressive 40 point margin. Points were accumulated on a negative basis (for mistakes); so the less points designated to a competitor - the better.

This was the first annual Top Gun competition held by the Commission. Events were selected according to skills required of Commission firefighters. Competition included a written test, timber volume estimation, land measurement, vehicle inspection, and an intensive truck and tractor obstacle course.

"I didn't really go into the finals with much confidence," said Abbott. "But I did go in with the attitude that I like to win and I practice."

Abbott's practice did not make perfect, but it resulted in an excellent performance. As soon as he won the district competition, Abbott began training. He practiced every day and

Although practice and study were vital factors in winning, there could be other important aspects. One might be that Abbott is doing what he always wanted to do.

night until the finals three weeks later.

Daylight training consisted of concentrated sessions with Commission Forester Reggie Lanier, and private forestry consultant, Irving Knox. Abbott also trained many hours alone. By nightfall, he was ready for academic study which included the *Commission's Policy and Procedure Manual* and *Forest Protection Manual*.

"My wife, Melody, helped out a lot," Steve said. "She took care of the kids those three weeks and gave me time to study."

Although practice and study were vital factors in winning, there could be other important aspects. One might be that Abbott is doing what he always wanted to do.

"Maybe it's every kid's dream to be a

forest ranger," Steve said. "It was always mine and it never changed."

Although born into a military family that moved frequently and exposed him to various lifestyles, Abbott never deviated from his desire to be a forest ranger. Before he was 12 years old, Abbott had lived in Michigan, Missouri, North Carolina and Germany. When he was 12, his family moved to Georgia and settled in Columbia County. After graduation from Evans High School, Abbott worked at a variety of jobs, ranging from short order cook to veterinarian's assistant.

Eventually he applied for a number of state jobs including forest patrolman. The patrolman's position was the first opening. He got the job and has been with the Commission ever since. Abbott started as a patrolman for the Richmond County Unit, where he worked for 17 months, then transferred to Columbia County under Wayne Meadows, who has been a Commission ranger for 25 years.

"I've never had a better patrolman, Meadows said." Steve is always ready to take on any task and help anybody out that needs it - and he consistently does a good job."

Abbott's Top Gun win was not th

first time he had distinguished himself in Commission related activities. He has been an active member of the Commission's Fire Tactics Team. The team simulates fire situations - complete with control center and logistical operations - for training Commission employees, industry personnel and the private sector.

Another activity was Abbott's participation on the U. S. Forest Service "Hot Shot Crew." The crew is composed of 20 members who received special training in firefighting to combat forest fires and other emergencies in the 15 states designated in Federal Region 8. Crew members were selected from five Region 8 agencies: Georgia Forestry Commission, Bureau of Indian Affairs (Cherokee National Forest), U. S. Fish and Wildlife Service, National Park Service, and U. S. Forest Service.

Out of 13 states, Abbott was the only member of the Hot Shot Crew from Georgia.

Bob Burns, Commission Training Officer who coordinated the state-wide Top Gun contest, said Abbott is the sort of role model needed to make the annual event a success.

TRAINING BAROMETER

"Steve made a very good score and has an impressive record with the Commission," Burns said. He added that although the Top Gun competition is all in the spirit of good fun, there is a practical side to the event. Burns said competition results provide a barometer for strengths and weaknesses - clearly showing where more training needs to be concentrated.

Burns said next year's Top Gun preparation will be expanded from a basic six-person committee and include every district ranger in the state. Each ranger will have a key role.

"We want an opportunity for new ideas as well as refining old concepts," Burns said. "The Commission has winning belt buckles already made for past the year 2000, but it's going to take some serious competition to separate Steve Abbott from the title."

In spite of Steve's impressive win, some of his competitors were not impressed. They informed him that they would be ready for him next year. Like an authentic Top Gun, Abbott replied that he would be waiting for them at sunup.

"That's what we need for good competition, Bums said." There's always a popgun after the Top Gun."

IPS BEETLES ON RAMPAGE

The destructive Ips Beetles have been on a rampage throughout much of Georgia this year and a severe drought has been the primary factor for their increase, according to Terry Price, Commission Entomologist. He said the last major epidemic of Ips Beetles occurred in 1980.

Some parts of Georgia are more affected than others. In past epidemics, the beetles killed small groups of about 10 to 15 trees. This year, spots have grown to several acres in the hard hit areas.

A total of 13,225 spots have been estimated in Georgia and trees accounting for 7,020 cords of wood have been killed, according to Price.

Ips beetles prefer overcrowded and overmature trees. Trees in this condition are weakened, especially during droughts, and offer a good home for the beetles. Epidemics of Ips beetles

usually last for one season and do not carry over to the following year, at least that's what the records show, Price pointed out.

Removal of infestations is the best control, he advised. Since Ips spots are mostly scattered throughout a stand it is impossible to meander through the trees and only take out a few here and there. Instead, landowners should block a big enough area to warrant a feasible salvage operation. This creates enough volume to attract a logger to the wood, as well as eliminates damage to residual standing trees by restricting the skidders and tellers just to the areas to be cut.

Wood markets have held up pretty good so far as the forest industries have made a good effort in trying to work with landowners in salvaging infested stands, Price said.



The University of Georgia

Georgia Center for Continuing Education
Athens, Georgia 30602

Schedule Of Forestry Short Courses

Timber Income Tax, Dec. 6-7, 15 hours; **Forest Appraisal**, Jan. 29-31, 21 hours; **Forest Inventory**, Feb. 11-13, 15 hours; **Introduction to Image Processing and Geographic Information Systems for Natural Resources**, Feb. 26-28, 20 hours; **Basic Communications Skills for Foresters**, Mar. 11-12, 12 hours.

Natural Regeneration of Southern Pine, Apr. 17-19, 12 hours; **Estate Planning for Forest Landowners**, May 1-2, 12 hours; **Point Sampling: A Timber Cruising Workshop**, May 7-8, 12 hours; **Forest Finance: Basic Tools**, Jun. 10-11, 12 hours; **Using INFORM and YIELD plus**, Jun. 12-13, 9 hours; **Logging Cost Analysis**, Jun. 25-27, 13 hours; **Introduction to Image**

Processing and Geographic Information Systems for Natural Resources, Jul. 23-25, 20 hours; **Forest Finance: Advanced Topics**, Jul. 30-31, 12 hours; **Growth and Yield Prediction and Quantitative Stand-Level Management Planning**, Aug. 26-28, 19 hours; and **Hardwood Management**, Sep. 4-5, 10 hours.

All hours are Category 1, Continuing Forestry Education (CFE). For additional information, contact Dr. Richard C. Field, Forestry Specialist, 404/542-3063, or Joseph Allen, Conference Facilitator, 404/542-1585, Georgia Center for Continuing Education, The University of Georgia, Athens, GA 30602.





Atlanta's Lenox Park, 165 acres in the Buckhead section being developed into a mixed-use community by Technology/Park Atlanta, Inc., has completed what may be the largest tree moving project of its kind ever attempted. In an effort to preserve and enhance the natural environment, 35 big trees were moved and transplanted at a cost of approximately \$120,000 - an average of more than \$3,000 per tree.

"If there is any other development that has moved this many big trees, I don't know about it," said Charles Brown, president of Technology Park/Atlanta. "I am extremely impressed with the concept and results. There was not a root the size of a finger cut, and so far the survival rate is 100 percent."

The concept Brown refers to is that of Instant Shade Trees, Inc., a national company based in Houston, Texas, that conducted the tree moving operation. The founder of the company, Al Korenek, designed the first all hydraulic tree transplanter in 1965.

After 25 years of research and refine-

ment, Korenek developed a specialized system and giant tree transplanter used on the Lenox Park project. His work has been recognized by the National Arbor Day Foundation.

Korenek's highly specialized equipment can move a 20-foot by 20-foot segment of earth weighing more than 300,000 pounds containing a single large tree. The system can transplant trees previously regarded as impractical - or impossible - for such an operation because of size.

"I'm always impressed by business people who are willing to do whatever it takes to make the setting as natural as possible," Korenek said. "Lenox Park is a special project, and I'm proud of the positive efforts made to ensure that these beautiful trees remain alive and well."

BUSINESS OASIS

Brown is also proud of Lenox Park with a projected completion date 10 years away. Located in this rolling terrain of cultivated forests, the finished park will offer a natural oasis for business in a city of rising sky-

MASSIVE ATLANTA SETS THE STANDARD

scrapers and expanding corridors of roadways. Brown intends to bring a park-like ambience to the urban locale, leaving some two-thirds of the former golf course area undisturbed as open space and landscaped green belts.

On the remaining third of the wooded property, Lenox Park will feature 1.5 million square feet of Class A office space, 150,000 square feet of a specialty retailing, a 600-room luxury hotel, and more than 3,000 residential units. The residential areas will range from detached single family homes to condominiums and apartments. With shopping areas, restaurants, a cultural amphitheater for entertainment, and cultural events, Lenox Park is expected



FREE MOVING LENOX PARK

...a round-the-clock center of
...ty.

...d all of this in a carefully culti-
... forest atmosphere of large and
... trees with more trees being
...ted throughout the 10-year
...opment. Thousands of seedlings
...s and hardwoods - have already
...planted. One large embankment
... visible from Brown's high rise
... overlooking the development -
...anted solid with pines. A scale
...el of the completed park is
...td near the overlooking window.
...culars resting next to a miniature
...e of trees offer a quick and closer
... of the work below.

...hough the largest trees have been
...ed and transplanted, many more

are scheduled that will not require the specialized capabilities of Korenek's equipment. Where buildings are scheduled for construction, Brown plans to remove trees and transplant them at a nursery site. As development progresses, these trees will be transplanted on other park locations.

Other amenities will include a centrally located park, several lakes, health club, paved jogging trails, and pedestrian walks winding through the trees. Most commercial parking will be coated subsurface.

Why all this fuss over blending the natural environment with technology? According to past experience, it's better.

EFFECT ON PEOPLE

"There is no doubt that the health, strength and earning capacity of the people is increased by a park," said Frederick Law Olmstead, landscape architect for New York's Central Park.

Realization of this concept goes back even further. In 1841, Henry David Thoreau predicted, "The really efficient laborer will not be bound to

crowd his day with work, but will saunter to his task surrounded by a wide halo of ease and leisure."

"Actually, man has been concerned with the environment since Adam and Eve," Brown said. "Only now environmental concern has taken on a new perspective because we're threatened with losing some of it."

Brown is intent on saving some of it. Olmstead's dream of establishing havens of natural greenery in the midst of urban concentration is the objective of Lenox Park.

Brown emphasized that it is unusual and fortunate to have property with the characteristics of Lenox Park located in a big city. He said the property offers an opportunity for environmental preservation and enhancement. The 35 large transplanted trees located on the 165 acre tract proved to be a major plus factor; these trees were much too large to have been transported through outside streets.

The Lenox Park area was once home for the Creek Indians, green wilderness with no indications that a town of any sort would exist. Eventually, however,



Giant transplanter moves trees during development of Atlanta's Lenox Park, where an effort is being made to preserve the natural environment of the area.

this historic land became the site of Atlanta's oldest chartered golf club. In a sense, the golf course became a saving grace for the land surrounded by urban developments. Building on open golf course areas, Lenox Park plans to preserve existing trees and natural beauty of the land, while enhancing it with pastoral landscaping and more tree planting. According to development guidelines, two-thirds of the site will remain in its natural state, or be landscaped, to provide a sanctuary atmosphere for those living and working there.

CITY IN A FOREST

"We are blessed in Atlanta with a beautiful natural environment. Atlanta is really a city built in a forest," Brown said. "So there is the potential to work with the environment. In some sections of the country, you have the choice of which rock you want to be next to."

Brown says that although the scenery in some of these barren areas is spectacular; it does not offer "the human scale type of thing" that Atlanta and the Southeast provides. Protecting the environment is nothing new to Brown or his company. Technology Park/Atlanta recently received the prestigious Governor's Award, recognizing Georgia's real estate development having the greatest effect in improving quality of life and the economy.

Brown's concern for the environment goes back to a time before it was

fashionable. A graduate of the Georgia Business Institute of Technology, he received a B. S. in Building Construction from the Department of Architecture. Brown practiced architecture briefly before entering the commercial real estate field in Atlanta. He has also been active in marketing and consulting throughout the Southeast. Concern for the environment is reflected in his projects.

"Some developers choose to protect the environment - some don't," Brown said. "We (Technology Park/Atlanta) probably put it first more than most. Environmental responsibility is the philosophy this company was founded on. I've been a part of the company's developments and refinements for 14 years, so I can take the blame or the credit."

The record supports Brown's statements. Technology Park/Atlanta has been winning environmental awards for 20 years, but now, as Brown says, "It may be more fashionable, more economical - it affects the bottom line



Charles Brown

more. And the trees, air and water are things that we are more attuned to."

In a recent gesture of attunement, Technology Park/Atlanta served as a major corporate sponsor for Atlanta's annual metro Christmas Tree Recycling Project. Trees were collected for mulch to beautify the recreational park system while reducing pressure on landfills. The recycling efforts collected 90,000 defunct Christmas trees and Brown's company gave away 30,000 dogwood seedlings in the process. The idea was to give away a dogwood seedling for every recycled tree. However, the dogwood supply was soon exceeded by Christmas tree donors, but this did not even put a dent in the enthusiasm of environmental supporters - they just kept coming.

Brown believes this large turnout for an environmental effort is a sign of the times. "For years, we were a throw-away society," he said. "I don't think you can blame people for this, it's just the way things developed. But now planting a tree and other environmental efforts ranks with God, motherhood, and apple pie - because there's not going to be any apple pie if we don't have the environment."

ALL VALUES INCREASE

Brown's projects are proof that it is profitable to protect the natural environment. He calls it part of an "enlightened self interest."

"We're in the business of creating value and protecting the environment is part of it," Brown said. "I do it to make money, but I also do it because I want to breathe and eat tomorrow - and because I enjoy working in such a place."

"The value of everything will be increased because of the park," Brown said. "The residential property is worth more. The office buildings, every business, every cultural pursuit, every person - they're all worth more because of the park."

All things considered, there can be little doubt that Lenox Park is destined to evolve into one of the most progressive and appealing multi-use communities in existence -- all nestled settled in and surrounded by trees. But the potential of trees was summed up long ago.

"The Lord made to grow out of the ground all kinds of trees pleasant to the sight and good for food." Genesis 2:9.



Father and son are well pleased with one of their larger wildlife food plots at their Franklin County tree farm and wildlife development. James Manners and son, Phil, live in Atlanta but often visit their rural retreat.

(continued from page 5)

foresters in converting their property into well managed and diversified acreage.

The Commission's forester began working with the Manners about four years ago when they sought his advice on improving the land. "The property had been neglected for some time by previous owners," he said. "It had been high-graded and Paul and Phil Manners were interested in a game management plan that would also improve their timber stand." Upon McMurry's recommendations, certain areas were to be planted in pines, while other sections of the slightly rolling hills were reserved for wildlife food plots.

ROUGH INTRODUCTION

The younger Manners recalls, however, that his introduction to reforestation was an unpleasant ordeal. He rode the tail end of a bouncing mechanical tree planter for "three very cold February days" in

1988 to drop loblolly pine seedlings in trenches ranging over some 20 acres. Although remembered as "one of the hardest things I've ever done," the landowner said he and Forester McMurry, who arranged for the loan of the planter, can now laugh about the experience as the seedlings had an excellent survival rate of 94 percent.

An additional pine planting was carried out on a 50-acre site after a pulpwood and logging harvest cleared out a long neglected stand. Forester Fox supervised the site preparation that was carried out with herbicides and assigned a crew to hand plant the acreage. "Engaging Walter Fox was a very wise move by the Manners," said McMurry. "When landowners live some distance from their rural property, the services of a consultant forester will be very beneficial."

Almost 400 acres of the land is in mature hardwood and young pine stands. Some 18 acres were planted under the Conservation Reserve Program and 90 acres were reforested

under the Forest Incentives Program. Trees were planted on 37 acres under the Agricultural Conservation Program.

Most of the land was purchased in recent years by the present owners, but Phil Manners said one parcel of about 60 acres "has been in the family for more than 150 years." He said his grandfather, who once owned the land, is best remembered in the area for having played baseball with the legendary Ty Cobb.

Wildlife food plots on the property encompass more than 11 acres and the plantings include orchard grass, wheat, clover and bi-color lespedeza. There are scenic ponds on the place and 35 acres are devoted to a duck habitat, while 25 acres constitute a quail habitat. Deer and turkey also roam the wooded areas.

The owners attempted some farming after acquiring the land, but Phil Manners said "we soon learned that row-cropping was not for us." His father, who grew up on a farm in Middle Tennessee, but said he had always wanted to own land near his son, agreed that farming was neither practical nor profitable and they decided a combination forestry and wildlife management plan would enhance the land and bring about the kind of enjoyment they expected from their ownership.

The Manners maintain a home on their rural property that serves as a welcomed retreat from the hustle of Atlanta's Peachtree Street. A caretaker lives nearby and keeps a sharp eye on the property.

Consultant Forester Fox terms the father and son team "very outstanding and responsible landowners who have reforested badly abused, cut-over forest land and the wildlife work they have done there is absolutely phenomenal." He said about 30 acres will have to be replanted this winter because of seedling loss due to the recent drought. After that planting, he said, all the Manners property will be in several stages of pine, stands of hardwoods and wildlife habitat.



The Carmichaels and the Manners - two Georgia families separated by 200 miles but who have the same goals: To realize the full potential of their forests through careful, intelligent planning; to be good stewards of the land that is in their care; and to work to perpetuate this great natural and renewable resource for the benefit of generations to come.



RURAL FIRE DEFENSE SHOP OPENS

A well equipped Rural Fire Defense shop and supply headquarters was recently completed at the Georgia Forestry Center in Macon. The personnel at the new facility will provide welding, pipe fitting and accessory installations on fire trucks and serve the six county units that now build the complete fire knockers, as well as the many units across the state that build only the tanks.

The shop is staffed by four employees and the overall operation is coordinated by Roger Browning, RFD Specialist.

The four-bay building features an overhead trolley and equipment includes an automatic threader for large pipe, a grooving machine and welding facilities. Hoses, pumps, fittings, bolts, belts and many other items necessary for outfitting the fire trucks are bought in bulk at a savings and distributed from the Macon shop to counties involved in the program.

The Rural Fire Defense Program helps provide fire protection in rural areas and small communities in 145 Georgia counties.

Top left, James Pritchett and Chris Hodge build a tank in the new RFD shop. Above, Pritchett works at the shop's pipe threader. Below, Brenda Haney discusses new equipment with Joe Collins, training officer for the Macon Fire Department with front of the shop in the background.



A native of Johnson County and a graduate of the School of Forest Resources, University of Georgia, he came with the Commission in 1961 and served in the Waycross and Rome districts. He left the agency in 1963 to work two years in private industry before returning in 1965 to head the establishment of the Commission's unique Urban Forestry Program.

Mixon became field supervisor of the Northern Region of the state in 1972 and later served in that capacity in the Southern tier of counties. In 1978, he was named Chief of the Commission's Forest Research Department, a new division of the agency at that time.

Mixon assumed the Directorship of the Commission January 1, 1983.

DEMONSTRATION DAY SET

Plans are underway for a comprehensive Land-Use Forest Management Field Day in Swainsboro May 3, 1991, according to Forester Chip Bates.

Bates said the purpose of the field day is to promote the concept of multiple use forestry by utilizing property for wildlife, timber production, recreation, and water quality.

He said the concept will be demonstrated with hands-on displays in a field environment.

The forester explained that personnel will conduct the field day to answer questions, help with ideas, and give guidance to landowners interested in the future of Georgia. The field day will be held in conjunction with the Pine Tree Festival in Swainsboro and will allow landowners to physically tour and experience demonstration areas showing the multiple use concept.



DR. MARX AWARDED WALLENBERG PRIZE

Dr. Donald H. Marx, an adjunct professor of plant pathology at the University of Georgia, has been awarded the coveted Marcus Wallenberg Prize, the highest honor in forestry.

Marx, director of the U. S. Forest Service Institute of Tree Root Biology in Athens, was selected for his role in establishing protocols to mass-produce and inoculate seedlings in nurseries with *Pisolithus tinctorius*, a beneficial ectomycorrhizal fungus that promotes growth and survival of pines, eucalyptus, and oaks especially on poor sites.

Originally intended for use in reforestation of strip mines and other distressed sites, *Pisolithus tinctorius* has found application in forest regeneration projects throughout the

world, and Marx has served as advisor to forest managers in North and South America, Europe, Ghana, India, Liberia, Malaysia, Morocco, and New Zealand.

According to the selection committee recommendation, Marx has developed "a process for the selective mycorrhizal inoculation of tree nursery soils, which greatly increases the growth and survival rates of conifer seedlings used in the reforestation of inhospitable soils."

Marx becomes the second UGA faculty member to receive the prize. Karl Erik-Eriksson, a biochemistry professor, received the prize in 1985 while associated with the Swedish Pulp and Paper Institute in Stockholm.

Scheduled for presentation by Sweden's King Carl Gustaf next September, the one-million Swedish kronor prize (\$175,000 U. S. dollars at the present exchange rate) recognizes pioneering accomplishments in research that significantly increase knowledge and progress in the forest industry's spheres of interest.

Marx was born in Canada and raised in Texas and Georgia. After serving in the U. S. Marine Corps, he earned B. S. and M. S. degrees from the University of Georgia, and a Ph. D. from North Carolina State University.

The Marcus Wallenberg Prize has been awarded annually since 1980 by Stora Koparberg. The company got its start in copper mining.



MIXON INSTALLED NASF PRESIDENT

Commission Director John Mixon was recently installed as president of the National Association of State Foresters.

As president of NASF, he will direct the 70-year-old association in its work to promote cooperation in forestry issues between the states and territories, and with a wide range of federal agencies and private conservation and environmental organizations. He will serve as president through October, 1991.

Working on national forestry issues is not new to Mixon as he has spoken before congressional committees many times and has served on NASF's executive committee for three years. Mixon has also been chairman of the Southern Group of State Foresters.

The Director has been with the Georgia Forestry Commission since the early sixties and has headed the state agency since 1983.

Commission Director John Mixon has been elected to Fellow in the Society of American Foresters.

In a congratulatory letter announcing the election, Arthur V. Smyth, President of the Society, said "this is an exceptional recognition bestowed upon you by your peers for outstanding service to the Society and to the profession. It is an honor which few receive, and one which you richly deserve."

A certificate in recognition of the honor will be presented to Mixon during a ceremony to be held by the Georgia Division of the Society.



Ranger Maurice Mathews places a notice on the bulletin board at the headquarters of the well-run Oglethorpe County Unit. The veteran ranger attributes the success of his unit to the hard work and dedication of his personnel.

OGLETHORPE COUNTY FORESTRY UNIT

Jobs were scarce in rural Oglethorpe County when Maurice Mathews finished high school in 1956 and the only work he could find was in a granite quarry. He operated a burner that cut channels in the rock so it could be excavated.

It was a rough job to run the noisy machine and tolerate the dust in all kinds of weather. Mathews said that about the time he decided "anything would be better than this," he was rescued by the Georgia Forestry Commission.

"Patrolman Fred Wheelless came by my house one night and said there was a job opening at the Oglethorpe Forestry Unit," said Mathews. "I applied and I got the job. The pay was not much better at the time, but the working conditions and benefits sure were!" That was 32 years ago and today he is ranger of the unit, a position he has held since 1972.

Ranger Mathews, who is often cited for his excellent performance record, holds the average fire down to about two acres in the largest county in area in the Athens District. The ranger and his three patrolmen work with 12 Rural Fire Defense units that engage more than 250 volunteer firemen; they

maintain a large shop to fabricate, mount and paint fire knockers for the rural fire departments in Oglethorpe County and many other RFD units in other counties around the state.

The ranger and his men are charged with the protection of 221,000 acres of forests in a county known for its abundance of wild game; Mathews said many landowners pay their taxes

"The men who make up the Oglethorpe County Forestry Unit are efficient, dedicated hard working individuals. You could never hope to find a better team to carry out the duties of the Commission. In addition to attending to the regular operation of the unit, the personnel maintains a large welding shop to turn out quality Rural Fire Defense equipment that benefits many sections of the state."

*Ken Bailey
Athens District Forester*

**ANOTHER IN A SERIES
OF STORIES ON OUTSTANDING
COUNTY FORESTRY UNITS**

by leasing land to hunting clubs. "I used to know everybody in the county," the ranger said, "but in recent years, people have been moving down from Athens." He said the influx of hunters during the season and the new residents moving into the county has not increased fire potential. "We do a lot of pre-suppression plowing," he said, "and landowners are cooperative in asking our advice in control burning."

The ranger and his wife, Shirley, have two sons, Terry and Wendell. Terry is director of Senator Sam Nunn's field office in Atlanta and Wendell is superintendent of Tri-County Natural Gas Company in Union Point. The ranger and his wife are active in Burts United Methodist Church.

John W. Tiller, Jr. was working at the granite quarry in 1972 when he was recruited by Ranger Mathews to fill a vacancy in the unit. He said he immediately found that life as a forest patrolman was a vast improvement. "I like the benefits, we have an excellent ranger, I can live in my home county and be free of traffic hassles and I'm working with many landowners I have always known," he said.

The patrolman said he was initiated on his first day with the Commission by being told to unload a heavy crawler tractor from a transport truck. He said he remembers the experience as being "a little scary that first time."

Tiller said he wasn't a carpenter, painter, welder, plumber or electrician "when I came here, but they've surely tried to make me into all those things." The ranger said Tiller and his other two patrolmen have perfected the many skills during a building program at the unit in recent years and "they continu-

to do professional work in welding, plumbing and painting in our fire knocker shop."

Patrolman Tiller and his wife, Winnie, who is with the Clarke County Health Department, have a son, Billy. The family attends Vesta Baptist Church

Patrolman James Gabriel was a maintenance supervisor for a Watkinsville manufacturing company when he spotted a GFC employment ad in the Oglethorpe Echo in the spring of 1977. "My work in Watkinsville was mainly inside," he said, "and during the few times I had outside work to do at the plant I realized how good it would be to have an outside job."

As patrolman, Gabriel is now enjoying the wide open spaces. The unit, located two miles North of Lexington, is surrounded by wide meadows and rolling hills. The patrolman said he grew up on a farm and has always enjoyed working with machinery. "I guess that's why I really enjoy plowing firebreaks," he said.

Edward's hobby is coin collecting, something he has been enjoying for 25 years. "I have always liked history," he said, "and a serious coin collector has an opportunity to learn a lot of interesting history." The patrolman said he has a sizable collection of rare coins and "each one has a story to tell."

Gabriel's wife, Sherrie, is secretary of the Commission's Athens District. The couple has two children, Brit and Jessica, and they attend Sonlight Baptist Church.

Roy Mattox, a native of Oglethorpe County, saw a lot of the world as a

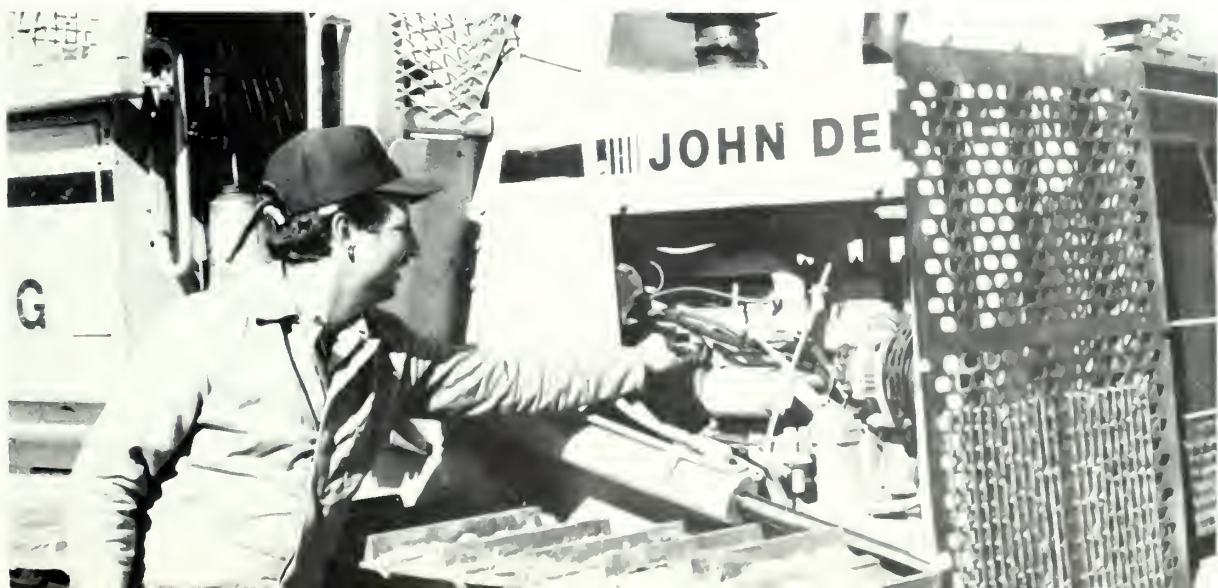


Top, Patrolman Roy Mattox checks gauges on a watertruck. At right, Patrolman James Gabriel sands one of the many Fire Knocker bodies that are built in the unit's welding shop. Below, Patrolman John Tiller, Jr. makes repairs on a crawler tractor.



soldier for 20 years before returning home and joining the local forestry unit as a forest patrolman.

Mattox, a Vietnam veteran who



also served in Alaska, Germany and several other countries, had a three-year assignment at the Pentagon in Washington during his military career.

The Oglethorpe High School graduate holds an associate degree in liberal arts from a college in Spokane, Washington and studied business administration at the University of Alaska. His hobby is music and he often plays guitar with his father and others in a small band that presents programs at nursing homes and makes other benefit performances.

The patrolman said he has received the "best possible training" while with the unit and has not run into any trouble, although he has experienced a "couple of hot ones." He said he enjoys working with dedicated people who make up the unit.



Patrolman Mattox and unit's mascot.

Patrolman Mattox and his wife Sharon, a geneticist who works in cancer research at the University of Georgia, live at Sandy Cross.

FLOOD

(continued from page 9)

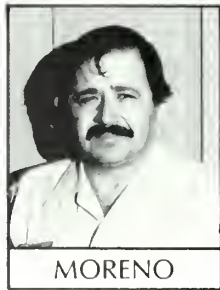
ious threat to lives and property.

Although he knew conditions were bad, Moreno was not prepared for what he saw when the Commission crew reached the rescue sites - cars floating at rooftop level, dogs swimming around looking for their homes that were now underwater, and furniture floating out of houses into yards and streets.

Some people were afraid and refused to come out of their flooded homes, while others waded in waist-deep water carrying television sets, small children, pets, or a jumble of valuables - trying to get to higher ground that was not there. At times, someone walking through the water, would step into a hole and disappear; fortunately, everyone Moreno saw managed to bob back to the surface and keep going. Many people seemed stunned and did not really know what to do.

"We went to every house we came to," Moreno said, "either walking or in the boats. We had to - because we never knew when there might be someone in there, hurt, sick, disabled or whatever. Then there were the children."

Moreno said they had to carry some



MORENO

people in wheelchairs through the water and put them into the boats. Everyone was then transported to an area elementary school for safety.

SCHOOL FLOODED

"But then the school got flooded," Moreno said, "and we had to take them to a railroad track on higher ground where they waited for transit buses to take them to a hospital that was already filling up with flood victims."

Back at the rescue site, Moreno encountered several critical situations. He rescued one frightened woman with six children, ranging from one to ten years old, all huddled in a badly flooded house that was getting worse. Then, a man he rescued by boat guided Moreno to another house where his aged father was trapped. No one else knew where the father was and the man was in serious need of dialysis treatment.

CRISIS COMPOUNDED

As the day wore on, Moreno saw houses that were completely destroyed by the flood as water continued to rise. Reports that more rain was expected compounded the crisis. Everyone in the area was afraid that more rain would break a nearby dam and release more water into this underlying area.

In addition to the threat of the dam breaking, Moreno and his coworkers already faced a variety of dangers. Snakes were swimming aimlessly about after having been driven from

the woodlands. Power lines had been knocked down into the water in some areas and electricity had to be immediately cut off. Broken sewer lines spewed sewage into waters already glutted with floating mounds of garbage - creating a frightening potential for disease.

Moreno said he considered the sewage to be the most threatening of all hazards. While wading toward a house, he saw a sewer line burst from water pressure that flung a metal pipe fragment through the air like a projectile to land 75 feet away.

"But we really did not think about the dangers then," Moreno said. "We just kept going, trying to rescue as many people as possible."

None of the Commission personnel stopped for food or rest. During the afternoon a television crew managed to get to the flooded area where Moreno was working. As Moreno was wading into the water toward a house, the television crew tried to stop him for an on-camera interview. Moreno never slowed his pace. He called back that he could not stop.

"I just felt that lives were at risk and I could not spend time on anything else," Moreno said.

REST AFTER NINE HOURS

In spite of the forecast for rain Moreno and other rescue worker began to get welcome glimpses of the sun as the afternoon wore on. No more rain came and after nine hours they rested for the first time.

Moreno remembered that he had not taken his required daily medication for a heart condition and insulin for diabetes; realizing he had suffered no ill effects, he felt tired for the first time during the hectic day.

Moreno, who retired from the Army after 21 years, said his military training proved valuable during the rescue operation, because the ability to make quick decisions in emergency situations stayed with him. He said Patrolmen McFerrin and Turman are also military veterans.

"But, you know," Moreno said, "I actually felt good when I got home. I felt like we had all done a good job - maybe even saved some lives. And I remembered what Harold Smith (retired Columbia County Ranger) told me when I first came to work for the Commission - he said, 'if there's ever a big rain, stay around for a while, somebody might need some help.'"

TWO PESTICIDE APPLICATION CONFERENCES SCHEDULED

A conference entitled "Pesticide Application with Environmental and Public Concerns" will be held in Macon, January 29, and in Statesboro the following day, according to the sponsoring Cooperative Extension Service.

The Macon conference will be held at the Georgia Forestry Commission auditorium and the Statesboro conference will be held at the Conference Center, Georgia Southern University.

Lamar Merck, Extension Forester, said

the two one-day conferences will benefit foresters, herbicide applicators and land managers. He said the program will highlight current environmental regulations and public perceptions about the use of herbicides in forest management. It will provide training on how to avoid problems and be better informed about regulations and public relations techniques.

A specially qualified team of instructors experienced in presenting the training will lead these conferences, Merck said, and recertification credits for registered forester and pesticide applicator licenses, as well as CFE credit, will be given.

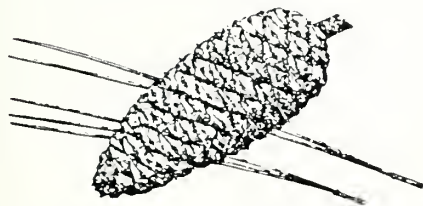
For more information, contact Lamar Merck, Extension Forester, Landrum Box 8112, GSU, Statesboro, GA 30460-912/681-5630.

TREES OF GEORGIA

By Paul Butts

Slash pine is a two-needle, yellow or hard pine that grows in Georgia primarily below the fall line. Its needles are as long as twelve inches, sometimes causing it to be mistaken for longleaf. The large purple male flowers occur mainly in

SLASH PINE
(*Pinus elliottii* Engelm.)



February. Early flowering loblolly will occasionally cross with slash and also with longleaf.

Slash pine represents 25 percent of the softwood timber volume in Georgia, while loblolly accounts for 45 percent. Ten percent is shortleaf and six percent is longleaf.

The species is favored for products because of its straight stem, small limbs, high wood density, and high strength. Slash and longleaf pines are the two species worked for gum naval stores, although natural crosses of either with loblolly will also produce commercial quantities of gum. These gum producing species have some resistance to bark beetle attack because they can drown or pitch out bark beetles with high flows of gum.

The Commission grows only genetically improved, high gum yielding, and rust resistant varieties of slash seedlings for sale. No open market slash seed are planted.

Slash has been widely planted over much of Georgia and the

South, particularly during the soil bank period of the 1950's and 1960's. Part of its popularity was the expectation that it might later have use as a source of naval stores income.

The species displays a very impressive growth and appearance in old field plantations, particularly during its first few years. This probably added to its popularity, and more than half of all slash pines now growing in Georgia were planted. The species does not occur naturally west of the Mississippi River.

In the original forest, slash or yellow pine was the tree of drains and better sites, while longleaf or hill pine was the tree which naturally grew and thrived on drier and poorer sites. Slash does not do well on these sites, which reduce its growth rate and compound its tendency to stagnate more readily than other pine species. After stagnation, trees lose their ability to regain rapid growth after thinning.

In the lumber trade, slash is mixed with longleaf, loblolly, and shortleaf, and sold together as one species that is designated, Southern yellow pine. The minor Southern yellow pine species include pond, spruce, Virginia, pitch, and table mountain. These minor species have a lower strength rating than the four major species.

In the days of wooden sailing ships, slash provided much of the masts, spars, and other components which required unusual straightness and strength. These same features today make slash the favored tree for pressure treated posts, poles, and piling, and for the higher grades of rated lumber.

NEW MANUAL PRINTED

How will forest landowners fare in an environmentally sensitive era? Is it possible to grow timber commercially and have abundant wildlife? How much do common forest management practices cost? Will herbicide usage increase timber profits?

These and many other important questions asked by forest landowners are answered in the 1991 *Forest Farmer Manual* due out in February 1991.

The manual, published every other year by Forest Farmers Association, has gained a reputation among southern forest landowners as being a timely and reliable source of information on tree growing in the South. Articles in the 1991 manual cover latest forest management advances, tax issues, timber markets and federal laws that affect timber growers.

The manual includes helpful directories of use to tree growers, including lists of all southern state foresters, extension forestry departments, forestry schools, possible timber markets and consulting foresters.

The 1991 *Forest Farmer Manual* is the 28th edition. Copies are available at \$20 each, plus \$3 postage and handling. Contact Forest Farmers Association, Box 95385, Atlanta, Georgia 30347 (404) 325-2954.



"I am a student pilot and I need HELP!"

COMMISSION PILOTS FLY INTO LIFE AND DEATH SITUATIONS

The aircraft pilots of the Georgia Forestry Commission are primarily in the business of helping save forests from the ravages of wildfire through close surveillance, but occasionally their flights take dramatic, life-saving turns.

Take, for instance, Pilots Brad Turner and Phil Cavanaugh.

Turner, the Commission's Air Operations Supervisor, was flying from Brunswick to Macon on a cloudy August day with Michael Mescon, president of a business consultant firm, as his passenger. They were returning from the annual GFC employees conference where Mescon was one of the principal speakers. Turner was flying at 6,000 feet just east of Dublin in marginal visual flight conditions when a nervous voice came over the radio: "I am a student pilot and I need help!"

Somewhere out in the murky sky the lost pilot, who said he only knew he was "some place between Dublin and Statesboro," was desperately trying to reach Macon Approach Control with his urgent message, but the foul weather was holding him to a low altitude of 1,700 feet and his voice was not getting through. That's when Turner attempted to relay his message to Macon, but the Commission pilot said "it became awkward and the student was becoming increasingly upset." He then asked and received permission from Macon and the lost pilot to take control of the aircraft.

Turner calmed the student by giving the frequency for the Dublin VOR (a navigational facility). The student pilot tuned the VOR and followed Turner's instructions. He was able to determine this aircraft's position from information passed by the student. Turner then gave headings for him to fly



Turner



Cavanaugh

until he was over Dublin, followed by headings to fly into the local airport. He was instructed to call Macon Approach Control as soon as he touched down, which he did.

Turner never saw the plane or learned the name of the pilot.

The 25-minute drama carried out that day in the clouds over Middle Georgia so impressed passenger Mescon that he wrote a letter to Director Mixon, stating in part:

"I want to commend the gentleman who piloted me yesterday. On our way home, he guided a distraught and thoroughly lost student pilot to a safe landing...Your pilot was able to pick him up on the Georgia Forestry Commission plane's radio and calmly, professionally and methodically helped this student land in Dublin. Your pilot was not only a good samaritan, but a genuine hero. You

can be very proud."

Pilot Phil Cavanaugh was flying in the Camilla District during the recent drought when he spotted a fire racing along a fence row. When a strong wind suddenly began whipping the blaze toward a nearby mobile home, he immediately radioed the nearest county unit, but he was flying over a very remote area and he knew the Commission firefighters would not be able to arrive in time to save the property if the fire continued to spread.

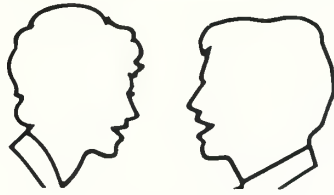
A car parked near the mobile home indicated that someone was probably at home and he buzzed the property to attract attention. Nothing happened and he tried it again. This time, a woman came out and looked up at his plane and turned around and re-entered her home. The flames were headed directly for the home when he made the third and fourth passes at an altitude of only 200 feet.

The woman came out the second time and saw the fire. She grabbed a garden hose and managed to douse the flames as they were about five feet from her car.

The pilot, who is on temporary duty with the Commission, and is a certified instructor who teaches flying in Tifton, recalls one humorous experience in trying to alert a resident of an approaching fire.

"This was in Early County," he said, "and I spotted a shed on fire in a back yard. It was some distance from the house and there was little danger of it spreading." He buzzed the residence and a man came out, looked up briefly, walked out to his mailbox and then went back inside his home. A couple more low passes got his attention and he ran for his garden hose.

PEOPLE



In The News

CHARLES D. (WOODY) BENTLY, a patrolman in the Berrien County unit since he came with the Commission in 1987, has been named ranger of the unit to succeed Monroe Gaines, who was recently promoted to district ranger, Statesboro. Bently is a native of Nashville, where he graduated from the county high school before attending Abraham Baldwin Agricultural College and Valdosta State College. The new ranger and his wife, Dana, and their daughter, Jodie, are members of the Nashville United Methodist Church...DARRON WRIGHT, 17, of For-



WRIGHT

synth County has received the 1990 F&W Young Forester Award and Scholarship for outstanding achievement in 4-H forestry activities. F&W Forestry Services, Inc., a forestry consulting firm with principal offices in Albany, established the award in 1983 to encourage young people to consider forestry as a career...WAYNE ROWELL, who came with the Commission as a forest patrolman in the tenth



ROWELL



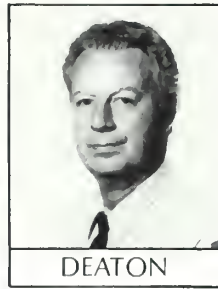
STEELE

district in 1986, has been named ranger of the McIntosh County Unit to succeed Ronnie Alvin, who was transferred to the North Bryan-Bulloch Unit. Rowell is a native of Baxley and a graduate of Jeff Davis High School. The new ranger and his wife, Lynett, have two daughters and two sons and the family is active in the Townsend Baptist Church. Rowell recently received a commendation from the U. S. Air Force for rendering service

during a jet fighter crash near Townsend...Personnel of District 11 recently welcomed BARBARA STEELE as



HARPER



DEATON

the new district secretary to succeed Frances Stevenson, who recently retired. Steele, who came with the Commission as a tower operator in 1975, is a native of McRae and a graduate of Telfair County High School. She also attended Ben Hill-Irwin Tech to learn secretarial skills and is presently enrolled for night classes at Heart of Georgia Technical Institute for further study in communications. The secretary and her husband, Vernon, have one son...NALDA HARPER is the new secretary of the Newnan District. She is a native of Carroll County and a graduate of North Clayton County High School. She worked for some time for an electronic manufacturer, where she edited the company's newsletter among other duties. The secretary, whose hobby is reading, has three children, Joel, Jo Beth and Amy, and one granddaughter. She has also served as a foster parent for infants. Harper and her husband, Mack, live in Palmetto...LOUIE DEATON, urban forester in the Atlanta area since the early 1960's, was recognized at the recent Georgia Urban Forest Council conference in Savannah as the Outstanding Educator of 1990. Calling Deaton the dean of urban forestry, past council chairman, Ed Macie, commended him for his tireless efforts to promote the management of trees in a growing city. "Although Mr. Deaton is not an educator in the formal sense, he has promoted all phases of environmental awareness to countless garden clubs, school groups, civic groups and individuals. He is a rare per-

son who has unselfishly devoted his life to preaching as he practices," Macie said...DEBORA NOBLES, a native of Biloxi, MS., who has lived in Georgia several years, is the new Milledgeville District secretary. She replaces MaryJo Coleman, who recently retired. Nobles, who is from a military family and has lived in many states, is a graduate of Dublin High School and attended Mercer University and Tift College. Prior to assuming the position at the district office, she was employed for the past five years in the administrative department at Mercer University in Macon. The secretary and her husband, Carlton, make their home in Gray. She enjoys hand crafts, especially needlework, as a hobby.



NOBLES

MERRILL NAMED HEAD OF NEWNAN DISTRICT

John Merrill, who came with the Commission in 1985 as a reforestation forester in the Athens District, has been named Newnan District Forester.



MERRILL

A native of Kansas, Merrill graduated from Kansas State College with a degree in accounting and worked in that profession for 15 years. He also was business manager for a college before moving South in the early 1980's to attend Auburn University, where he earned a degree in forestry.

The new district forester succeeds Preston Fulmer, who was recently named field supervisor and transferred to the Macon Office.

Merrill and his wife, Martha, have three children: Wesley, Amy and Christine. The family is active in the United Methodist Church. The forester said the family's favorite recreation is hiking and camping in the mountains.



BEFORE YOU SELL...

The optimum age for harvesting and selling pine in Georgia is 30 to 40 years, but the actual sales transaction can take place in 30 minutes or less! Georgia landowners are reminded that it is often wise to get an offer from more than one buyer and to insist on a properly written contract. There are other important considerations. For professional advice, contact a consultant forester or the Georgia Forestry Commission.

SERIALS SECTION
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ATHENS

GA 30602

SECOND CLASS POSTAGE PAID
AT MACON, GEORGIA

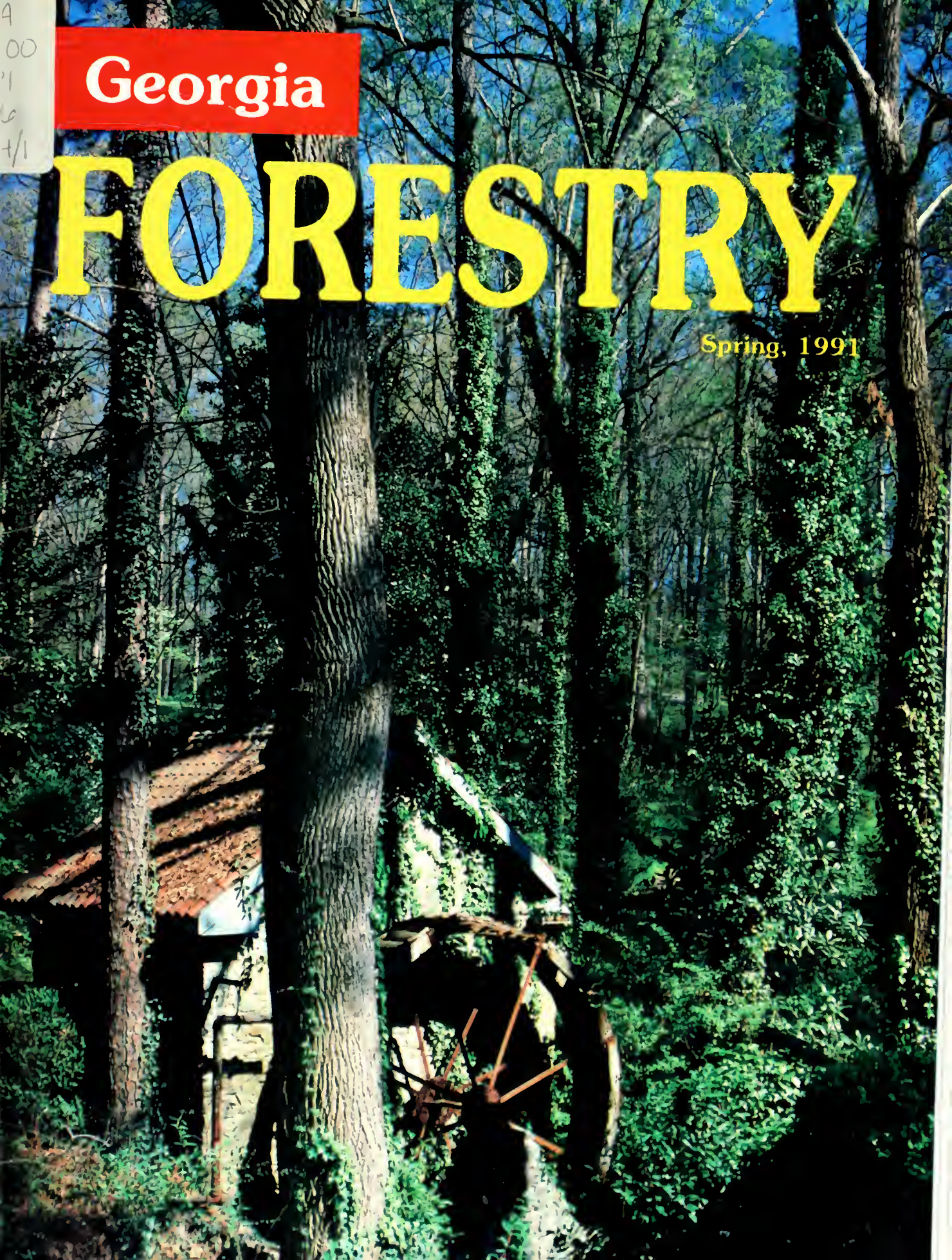
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Georgia

FORESTRY

Spring, 1991



CHAMPION TREE FARMER ORGANIZES MEETING ON ENVIRONMENTAL ISSUES

C. M. Stripling, past National Tree Farmer of the Year, is making preparations for a spring meeting of Georgia based environmental organizations to discuss environmental issues in relation to forest management practices. The meeting will be held at Stripling's Camilla tree farm.

Organizations to be invited to the meet include: The Wilderness Society, Audubon Society of Atlanta, Sierra Club (Georgia Chapter), Georgia Conservancy, Georgia Environmental Council, Georgia Trappers Association, and Trout Unlimited (Georgia Chapter).

Bill Lamp, Commission project for-ester for the Camilla District, is working with Stripling on preparations for the meet. Last year, Lamp and Tommy Justice (past president of the Audubon Society's Albany Chapter), toured Stripling's farm and agreed that if such a meeting could be arranged, it would be beneficial to all concerned.

"The point is that for years many groups have been at odds with each other and the result is that positive accomplishments have been hin-

dered," Stripling said. "Even the environmental groups are often at odds with each other on this and that."

However, Stripling emphasized that if the forestry community and environmentalists (as well as other groups) could agree on some common interests and goals - many positive influences could be put in motion.

"We need some mutual agreement when these groups approach the legislature," Stripling said. "You can get a lot more accomplished if eight or ten groups address the legislature in agreement on one point - than if all these groups are disagreeing on different issues."

Stripling said the Spring meeting will include lunch, an informal group discussion, and A tour of his tree farm, including wildlife management areas.

"The door is open," Stripling said. "Sooner or later this sort of thing is going to happen. So an informal get together like this now certainly could not do any harm. Who knows? Somebody might even have a good time."

Stripling urges anyone interested to contact him at 912-336-8973. ■

NATIONAL FORESTS CELEBRATE 100TH BIRTHDAY

One hundred years ago (March 3, 1891) Congress empowered the president to set aside reserves out of public lands, and thus was born the National Forests. This spring the U. S. Forest Service and other conservation organizations are celebrating this important centennial in the nation's history.

Support for forest conservation that led to the creation of the National Forests came in the late 1800s when citizen groups and state leaders arose in response to all-too-frequent forest destruction by fire and wasteful timber harvesting.

The concept was formed that the government could act as permanent

custodian of the public's watersheds, timber supply, grasslands, wildlife, and outdoor recreation opportunities.

On that date, the Creation Act (attached as a rider to a complex land law) gave the president the power to create forest reserves for conservation purposes. These reserves were part of the 191 million acres which today make up the nation's National Forests.

Conservationists point out that it's important to remember that the centennial observance is not a celebration of the agency known as the Forest Service, but the 100th Birthday of those public treasures known as National Forests.

Persons interested in additional information on the Centennial should call the U. S. Forest Service in Gainesville, (404)536-0541. ■



ON THE COVER - Early spring brings out the greenery around this quaint cabin and water wheel near the banks of the Ocmulgee River in Bibb County.

(Photo By Billy Godfrey)

Georgia

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SOUTHERN PINE LUMBER:



HOW DRY IS DRY?

Unfortunately, logs are not sliced into neat construction timbers at the mill and sent directly to the retail lumber yard to immediately become studs, joists and rafters for the builder. There is always a detour, and that's called the drying process.

By

Dr. Julian R. Beckwith, III

When lumber is first cut from a log of Southern yellow pine, it actually feels damp and heavy; the wood is sticky as gum gradually seeps out of it. Little wonder then that the professional builder, as well as the handyman, is reluctant to use it in this state because of its dampness, weight, sticky gum and tendency to warp as it dries.

The water that was so vital to the life of the tree as it grew in the forest suddenly becomes a hinderance as it passes through the saws at the lumber mill. Methods must be applied to greatly reduce the moisture content in the wood before it can be effectively utilized as a building product. Approximately half the weight of freshly-cut Southern pine lumber is attributed to water.

As soon as lumber is cut from a log it begins to dry, and as it loses moisture it becomes lighter, stiffer, stronger and it shrinks. However, if it is properly dried, good grades of lumber don't shrink, swell or warp noticeably in use. Nails

and screws hold in dry lumber better than in wet, and dry lumber is easier to saw and plane. If lumber is kept dry it won't rot, and most insects will not attack it. However, if lumber must be exposed to moisture it can be protected from insects and decay by treating with preservatives, after first being dried correctly.

Drying Southern pine lumber at temperatures higher than it will reach in use "sets" the sticky gum to prevent bleeding by boiling off the components that are liquid at low temperatures. In addition, elevated temperatures kill stain and decay fungi, as well as nematodes and insects which may exist inside lumber. Both gum setting and biological sterilization of lum-

ber can be achieved only by kiln drying, since air drying does not produce temperatures high enough for either. All these benefits of dry lumber make it more valuable than fresh-sawn lumber.

Wood moisture content is an expression of the amount of water in wood compared to the weight of the dry wood itself. It is determined by weighing wood wet, drying it, weighing it again and dividing the weight loss (amount of water boiled off) by the dry weight, then converting to percent. Wood's tube-like cells which are aligned lengthwise in a piece of lumber hold most of the water in their hollow centers like water in a straw. This is called "free water". The rest of the water in lumber is held within the wall structure of these cells and is called "bound water".

During drying, free water evaporates easily and quickly, while bound water requires more energy and time to remove. Removing free water from wood causes weight loss with no shrinkage, but removing bound water

causes wood cell walls to shrink, therefore making the whole piece shrink.

Moisture closest to the surface of wet lumber evaporates first, followed by water from deeper inside. Since moisture can move along the length of the tube-like cells faster than sideways from one cell to another, lumber dries out at the ends faster than at the middle. This causes the ends to shrink before the middle, sometimes producing end splits. Under severe drying conditions the surface of lumber will dry too fast and shrink too much before the center does. The large difference in shrinkage between the surface and center causes stresses in the surface which produce small cracks, called checks. Natural wood characteristics such as spiral grain, compressionwood and juvenile wood cause irregular shrinkage patterns which show up as warp. When a board warps sideways, it is called crook or side-bend, bow is an end-to-end curve, cup is a side-to-side curve and twist describes an end-to-end rotation.

BALANCE ATTAINED

In a particular environment, the moisture content of wood products eventually reaches a balance with the humidity in the air around them. This is called the equilibrium moisture content (EMC). Under normal conditions, lumber in the South will reach equilibrium at about 15 - 18% moisture content when left outside but protected from rain, snow or other water. In heated/air conditioned houses, humidity is much lower, commonly producing an EMC of 6 - 10%.

For particular products and uses, lumber is dried to a target moisture content which equals the EMC value for the anticipated environment.

When fresh lumber is stacked in the open air, water begins to evaporate from it. On hot windy days when humidity is low, wood dries fairly quickly. On cold, cloudy, still, misty days, humidity is high and little if any drying takes place. To allow air to circulate easily through lumber stacks, long narrow spacers called stickers are

put between each piece. These are laid perpendicular to the length of the lumber at approximately two-foot intervals. The time it takes to air dry Southern pine lumber depends on the time of year and the weather. Heavy wood usually takes longer to dry than lighter wood, and some pieces seem to dry faster regardless of weight.

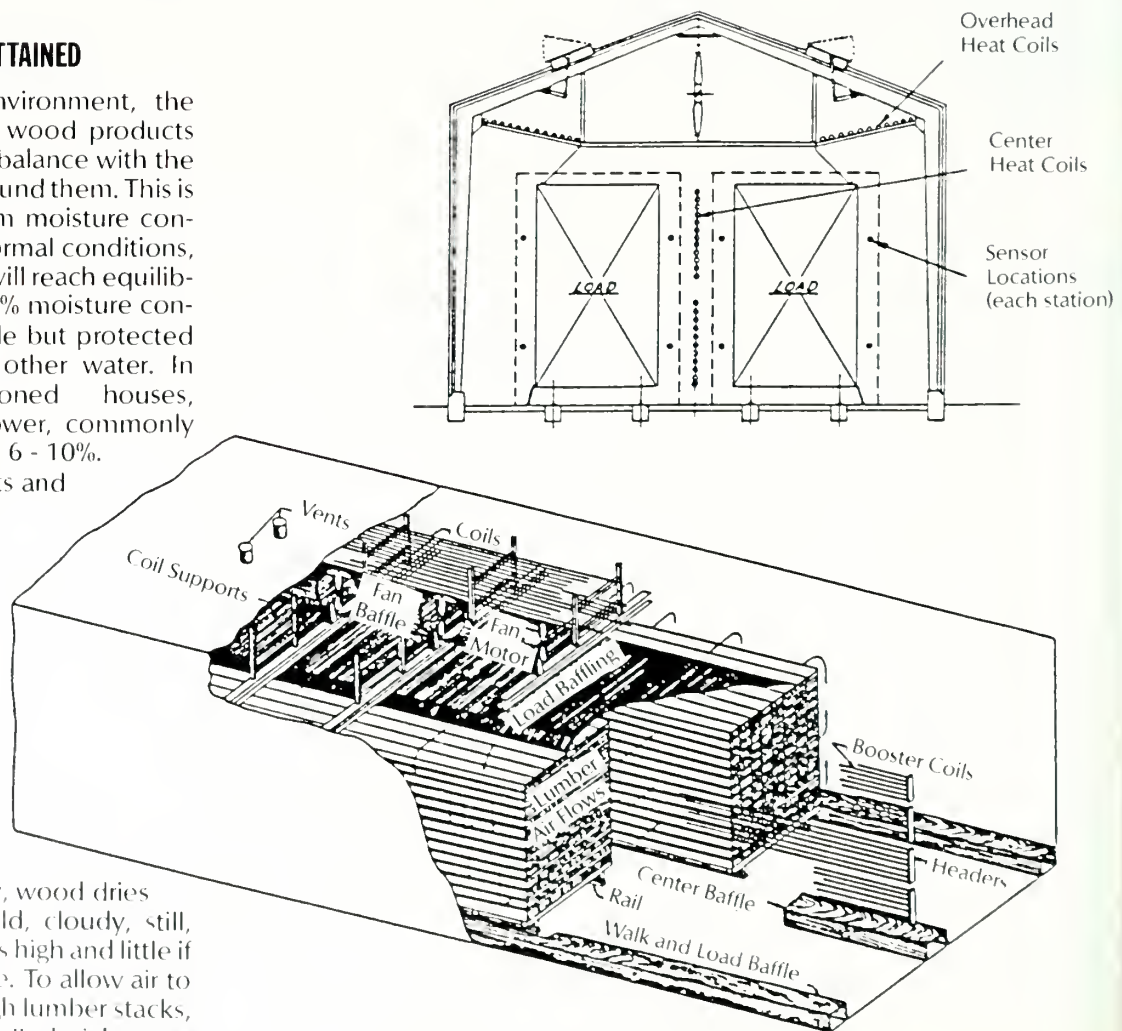
WINTER SLOWS DRYING

During winter, wood dries slower because of lower temperatures, and of course rainy weather keeps humidity too high for rapid drying. As indicated, in the Southeast temperatures and humidities will only dry lumber down to about 15% moisture content, which is not low enough for wood which will be used in heated/air conditioned situations. That means, lumber for furniture will have to be kiln dried even if it has been air dried first. Southern pine may air dry in three months or less

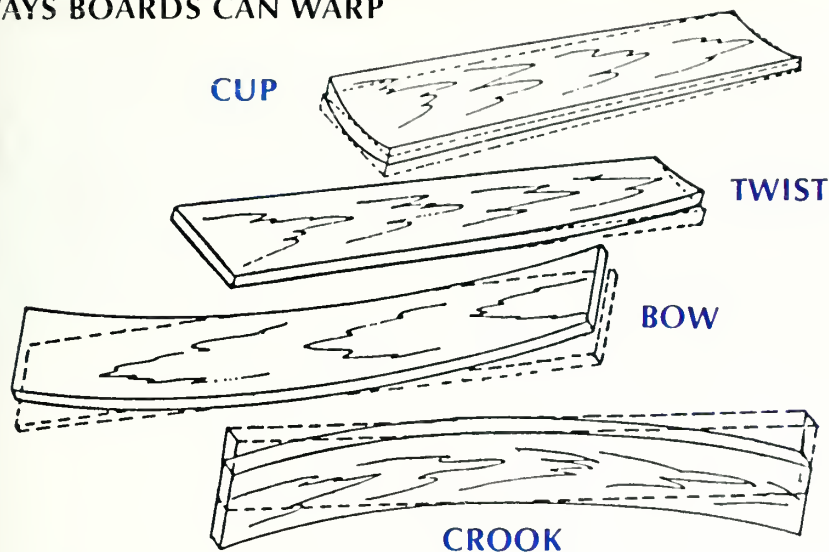
in the summer.

Because weather conditions are uncontrollable, the speed of air drying and the resulting wood quality are unreliable. To increase drying rate and to improve quality, lumber dry kilns are used. Kilns are large insulated buildings or chambers in which the temperature, humidity and velocity of circulating air are controlled. Low temperature kilns are heated only to a maximum of about 130°F., and commonly use air velocities of 200-500 feet per minute (fpm). Conventional

Drawings show front elevation and cutaway of a modern dry kiln. Opposite page: Lumber is properly stacked on the mill yard for air drying.



WAYS BOARDS CAN WARP



kilns may reach 200°F., with air speeds of 300-1000 fpm. For lumber which can be dried rapidly without major drying problems, high-temperature kilns are used at maximum temperatures of 240°F. or more with air speeds of 1000-2000 fpm. Wood for different products may require different temperatures, air velocity, humidity and lengths of time to dry properly. By varying these factors, lumber drying rate can be controlled to remove moisture as fast as possible to achieve a particular level of quality. For instance, Southern pine framing lumber can be dried in 15 to 18 hours in high-temperature kilns, while furniture-grade lumber may require several days in lower temperature kilns.

BUILDING CODES DICTATE

Building codes require that lumber used for structural support in home construction be stamped with a certified grademark. This mark is assurance that the lumber meets certain minimum strength standards. Only two grading agencies can legally authorize certified lumber grading of southern pine; they are the Southern Pine Inspection Bureau (SPIB) and Timber Products Inspection (TP). All certified lumber grademarks will have the logo of either one or the other of these agencies as part of the mark. Grademarks will have a moisture content indication also. For grademarked southern pine framing lumber, moisture content limits are part of the standard grade requirements for all lumber two inches and less in thickness. The

resistance to flow of direct electric current through wood varies with its moisture content, and electric resistance moisture meters can measure moisture content quickly and adequately in the range of about 7% to 25%.

For most Southern pine framing lumber, two moisture content levels are considered standard; 15% and 19%. The 19% value can be reached easily

by air drying, and even air drying to 15% is possible in some climatic regions at certain times. However, air drying to these levels is relatively slow, and will not set gum or sterilize lumber. Therefore moisture content indications on lumber which has been kiln dried at elevated temperatures can be designated "KD", such as "KD 15" or "KD 19". If low temperature drying or air drying were used to reach the indicated moisture content, a "KD" designation cannot be used. In such cases, "MC 15" or "MC 19" and "S-DRY" must be used. The "MC" indication simply means the lumber has been dried to the maximum indicated moisture content, and can be used on lumber which has been air dried, low-temperature dried, high-temperature dried or all three. The "S-DRY" indication simply means the lumber has been dried to a maximum of 19% moisture content. No matter what the moisture-content indication, the maximum moisture content value designated has been achieved.

Dr. Julian Beckwith, III is a wood products specialist, University of Georgia Extension Service.



"I get a lot of calls from Thomas County landowners who tell me how efficient and courteous our ranger and his patrolmen are in providing Commission services...Whether they are battling a forest fire, handling seedling orders, working on Rural Fire Defense equipment, collecting seed or merely painting a building, they take tremendous pride in their work and it shows."

*Gregg Findley
District Forester*

Ranger Forrest Sumner said he couldn't have had a better crew of patrolmen to work with him in the Rose Capital of Georgia even if he had been given the opportunity to hand pick his men. He contends that there is not a thorn in the bunch.

The bunch includes three dedicated individuals who came from similar backgrounds that well qualify them for the duties they now perform for the landowners and other citizens of Thomas County. Much progress has been made by the unit, according to Ranger Sumner, and he predicts a rosy future for forestry in this aggressive South Georgia County.

"Our patrolmen all grew up on farms around here," Sumner said. "They all have agricultural backgrounds that demanded hard work and the operation and maintenance of all kinds of farm machinery. Naturally, they had the skills from the very beginning to do the major portion of the unit's work."

Sumner, a Thomas County native, is a graduate of Central High School in Thomasville, who earned an associate degree in forestry and wildlife management at Abraham Baldwin College. He came with the Commission as a patrolman in Decatur County in 1978 and became assistant ranger before his transfer to Thomas County in 1986 to assume the ranger position.

"There is no way I could do my job if I didn't have the complete cooperation of my crew," Sumner declared. "The patrolmen are very talented and very efficient. They work hard and they take tremendous pride in their work. Actually, they free up my time so I can work closer with landowners and attend to many other duties required of a ranger."

Greg Findley, Camilla district forester and Sumner's immediate supervisor, paints a rosy word picture of the

THOMAS COUNTY FORESTRY UNIT

Thomas County Forestry Unit.

"I get a lot of calls from Thomas County landowners who tell me how efficient and courteous our ranger and his patrolmen are in providing Commission services. I have also been impressed with Ranger Sumner and his men and I know our district can always depend on them for excellent per-

ANOTHER IN A SERIES OF STORIES ON OUTSTANDING COUNTY FORESTRY UNITS

formance regardless of the task. Whether they are battling a forest fire, handling seedling orders, working on Rural Fire Defense equipment, collecting seed or merely painting a building, they take tremendous pride in their work and it shows. The unit works with several youth groups and cooperate with their city in the annual Rose Festival."

The unit personnel builds and paints Rural Fire Defense equipment that benefits many volunteer fire departments around the state. When they are not working in the shop, fighting forest fires, plowing pre-suppression fire-

breaks, working on equipment or handling seedling orders, they are usually busy this time of the year planning and building another prize winning float for entry in the annual Thomasville Rose Festival Parade. The unit's float features Miss Georgia Forestry and spotlights the importance of forestry for thousands along the parade route and television viewers.

During 1990, the unit built a completely new float, which was entered in the Florida Festival as has been done annually for some 15 years. The float won the coveted Grand Marshal Award. The Thomas County Unit also was presented the Unit Of The Year Award at the annual Georgia Forestry

OPPOSITE PAGE: Top left, Ranger Forrest Sumner; right, Patrolman Ed Baggett; bottom left, Patrolman Danny Kelley, right, Patrolman John Huthinsor



Association meeting on Jekyll Island in 1990.

Sumner's unit built nature trails at a youth camp and an elementary school with the cooperation of Forester T. S. Lee, who often assists with Thomas County forestry-related projects. The ranger works with Greenwings, the youth division of Ducks Unlimited, and is coach for youth teams in baseball, football and soccer. He is den leader for a Cub Scout Pact. The ranger said one of his most rewarding experiences was his work with a church group in helping repair homes in the Charleston area following the devastating hurricane.

Sumner and his wife, Mabel, an accountant, and their children, Corey and Kelli, are members of Calvary Baptist Church, where the ranger is Sunday School teacher.

PATROLMAN JOHN HUTCHINSON

Patrolman John Hutchinson was a bulldozer operator during a six-year hitch with the 560th Engineering Battalion of the Georgia National Guard and that experience, in addition to his operation of farm machinery for several years, qualified him to work with heavy equipment at the outset when he came with the Commission in 1977.

Hutchinson, a graduate of Central High School in Thomasville, said he thoroughly enjoys plowing firebreaks and is pleased that he has learned many new skills since coming with the unit.

Hutchinson, who lives with his wife and two children near Pavo, said he gave up farming to work with the Commission because "there is no way you can make a living farming...I enjoyed farming, but the money is no longer there." He said he enjoys tending to a grove of pecan trees near his country home and playing the rhythm guitar "just for my own enjoyment...I'm not a professional."

PATROLMAN DANNY KELLEY

Patrolman Danny Kelley, a graduate of Miller County High School in Colquitt, worked in a textile mill for seven years before he escaped to something he said is "much, much better." He joined the Thomas County Unit crew in 1987.

Kelley said the mill work was very confining and when he had an opportunity to come with the Commission and work outdoors, he lost little time in making the change in employment.

Things have been going smoothly for

the patrolman, with the exception of a little incident on a summer day in 1988: "I was plowing a fire and a big snake fell off a limb and into my lap," he related. "Naturally, I was strapped in the cab and all I could do was grab it and sling it out of the tractor and be thankful it was a black snake instead of a rattler."

Kelley and his wife, Nina, and their sons, Brandon and Jeremy, live on a farm six miles north of Thomasville.

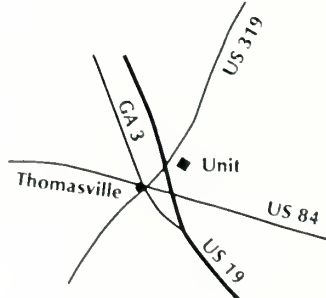
PATROLMAN ED BAGGETT

Patrolman Ed Baggett was about seven years old when Commission personnel came near his rural home in Thomas County to extinguish a big forest fire. Although their equipment would be considered somewhat primitive when compared to today's modern GFC tractors and plows, the youngster was impressed and knew that he would one day want to be a forest firefighter.

His childhood ambition came to pass in 1963 when he was employed by the Commission and began operating a 40 John Deer, one of the early plow units used by the Commission. He also remembers operating a mist blower that was used to kill hardwoods. "It was a blower attached to a crawler tractor to blow a chemical mixed with oil about 15 feet straight up," he said. "It was pretty effective, but it was very difficult to work with and I'm glad the system was abandoned." He said he greatly prefers plowing firebreaks.

Baggett and his wife, Judy, and son, Ivan, live on the Ochlocknee River and attend the Ochlocknee Baptist Church. They also have a married daughter, Wina.

Patrolman Baggett, a graduate of Central High School in Thomasville, turns to music for relaxation; he can play almost any kind of string instrument. He is a good cook, but he said "my wife won't let me in the kitchen very often because she said I make too much of a mess." The veteran patrolman joins many of his neighbors and friends in growing the roses that has made his area the attractive rose center of Georgia.



DOGWOOD DISEASE HITS 18 COUNTIES



The Commission is continuing to monitor Georgia counties for evidence of dogwood anthracnose, a fungus that is killing many of the popular flowering trees along the nation's Eastern Seaboard.

Terry Price, Commission entomologist, said the disease was first discovered in Georgia in 1987 in the Cohutta Wilderness area and has now spread to 18 counties. He said it has caused considerable hysteria among homeowners, as some plant pathologists are comparing its severity with that of the chestnut blight which virtually wiped out most of the nation's native chestnut trees. He noted, however, that there are other pathologists who are "less pessimistic."

Although dogwoods growing in the forests are at more risk from infection, trees growing in open residential lawns are not free from the disease. Price cautions homeowners, however, not to dig wild dogwoods from the woods and transplant them in home yards. "Trees should be purchased at reputable nurseries and never planted in complete shade," Price explained. "They should be watered during drought conditions."

The entomologist said several fungicidal sprays are currently being tested to combat the fungus and the Commission is cooperating with the U. S. Forest Service in tracking spread of the disease.

Price said homeowners suspecting the disease should contact the Forestry Commission. He said a disease diagnosis center is maintained at the Commission's state headquarters in Macon and the presence of the disease can be confirmed by laboratory culture.

When Dillard talks about Three Forks and the surrounding area, there is a haunting quality of time and place evaporating - a passing of one age to another with Three Forks still existing as a dramatic remnant of vanishing wilderness.

GEORGIA'S THREE FORKS WILDERNESS



By Bill Edwards

Three Forks - a densely forested mountain area secluding the Chattooga river headwaters in the Northeast of Georgia - may be the last real wilderness area of its kind in the state.

To Malcolm "Chick" Dillard, a native of nearby Dillard, GA (the town was settled by his ancestors in the late 1700s), there is no question about it. "This is real wilderness well

worth the protective efforts of the U. S. Forest Service," said Dillard. "All things considered, I think they are doing an excellent job of protecting and managing the area."

Located in the Chattahoochee National Forest where Georgia meets the Carolinas, Three Forks is the merging point of Holcomb Creek, Big Creek and Overflow Creek. These near-pristine streams flow down from the mountains to form the West Fork

of the Chattooga River.

Winding through heavily forested gorges with relatively undeveloped shorelines, the Chattooga is one of the few remaining rivers in the Southeast possessing free flowing white water in a primitive setting.

Malcolm Dillard, 56, works out of the Atlanta headquarters of the Department of Education (Vocational Agriculture) as a vocational forester. Although he has traveled extensively

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Malcolm Dillard

“When my ancestors settled here, the whole mountain range was wilderness,” Dillard said. He recalls stories from his grandfather of Indians appearing out of nowhere to trade goods - only to disappear again into the shadowy forests.

during his forestry career, Dillard has always been drawn back periodically to this pocket of mountain wilderness near his home. He says it “recharges his batteries” and reconnects him with nature.

“Three Forks is unique,” Dillard insists. “Variations in elevation and high rainfall combine to create a rare and conducive environment for trees and plants.”

A 1957 graduate of the University of Georgia’s School of Forestry, Dillard points out that hardwood species in the Three Forks area include a variety of oaks: white, black, scarlet, chestnut, and northern red. Mixed with the oaks are hickory, yellow poplar, basswood, and red-maple. Minor species include black cherry, walnut, cucumber magnolia, ash, and gum.

Many stands of trees, especially those facing north, are dominated by Eastern white pine. There are also impressive stands of dogwood that seasonally bloom into slopes of white flowers.

“I believe Eastern white pine grows to its largest size in the Three Forks area,” Dillard said. “I know that the Big Tree Register lists a white pine in Michigan that’s bigger than any recorded in Georgia - but I think that’s just because somebody hasn’t looked good enough in the Three Forks area.”

When Dillard talks about Three Forks and the surrounding area, there is a haunting quality of time and place evaporating - a passing of one age to another with Three Forks still existing as a dramatic remnant of vanishing wilderness.

Even the names of nearby places conjure visions of wilderness mountains: Owl Gap, Hanging Rock, Warwoman Creek, Oakey Top, Big Shoals, Drip Nose Mountain.

“When my ancestors settled here, the whole mountain range was wilderness,” Dillard said. He recalls stories from his grandfather of Indians appearing out of nowhere to trade goods - only to disappear again into the shadowy forests.

“But those days are gone,” Dillard said. “And anything left of this sort of environment should be preserved and carefully managed.”

WILDERNESS EXPERIENCES

Dillard’s appreciation of wilderness is not prejudiced by the Three Forks general area being his birthplace. He is no stranger to other wilderness areas and makes comparisons logically. In 1953, an 18-year-old Dillard worked as a lookout fireman in Oregon’s Willamette National Forest. Unlike Georgia, the Oregon mountains had no lookout towers and Dillard was required to walk 10 miles every day to check at high points for smoke signs. During this assignment, Dillard went for 43 days without seeing another human being; smoke was reported by radio. Eventually he walked 30 miles through the mountains to visit the nearest camp.

His lunch was often collected by throwing a stick into multitudes of grouse that flocked around his remote cabin. He was not allowed to have a gun of any sort because his predecessor had shot a bear in front of the cabin. The shooting suc-

ceeded only in irritating the bear enough to wreck the cabin in pursuit of his antagonist.

“The point is that the Oregon mountains were real wilderness too - especially in 1953 - but Three Forks is different,” Dillard said. “I think anybody with any appreciation of nature, who has been there, realizes this.”

Dillard made his first trip into the Three Forks area when he was 12 years old. The memory lingers in great detail and it was this boyhood excursion that triggered a lifetime of returns to this remote contact with nature.

“I went with an older cousin (Edward Singleton) who lives in the area, and a friend (Joe Ed Brown, deceased),” Dillard said. “That first trip was like descending into a primeval forest. It was really what started me trout fishing.”

Dillard remembers crawling out of his sleeping bag that cold April morning 43 years ago to find red worms frozen stiff in the can. So he sat down under a big white pine, with the sound of rushing water all around him, and tied a Royal Coachman wet fly that caught his first speckled trout.

Although silt has now crept into some areas of the streams, and stocked rainbow trout compete with the native speckled species, Three Forks remains basically unchanged.

Thriving hardwood forests still offer ideal habitats for deer, turkey, grouse, and some bear; while teeming populations of timber rattlers make their homes in mountain dens.

Although the numbers of some wildlife species have diminished, the

area has become no less difficult for human beings to traverse on foot.

Pioneer botanist William Bartram marked the historic Bartram's Trail in this vicinity during his trek through Georgia. No white man is believed to have set foot in the area until the early 1700s. The earliest records are maps drawn by hunters in the 1730s. Even then, some writings indicated the difficulty of traveling through the mountain gorges.

Today, the U. S. Forest Service recommends that only experienced hikers in good physical condition attempt the journey to Three Forks. Descending from the west side, everything appears deceptively simple at the outset. However, changes in terrain can be sudden, drastic and dangerous. Abrupt drop offs down vertical rock walls are common. Some drops may be 30 to 40 feet to swirling water in rocky streams below. Slippery rocks and loose vegetation can make the situation even more hazardous.

SCENIC, BUT HAZARDOUS

The descent can also be confusing in some places. What seems to be a mountain trail can blend into furrowed mountain contours that become a dense tangle of up-and-down slopes. If the hiker comes out on the West Fork, downstream from Three Forks, he is confronted with cliffs that may reach 200 feet above white water rushing over rocks below. A 16 mile stretch of the Chatahoochee includes some scenic but hazardous white water.

"It's sort of hard to get to," Dillard said. "You can't walk upriver. The only way is to go from the top of the mountain to the bottom."

However, Dillard considers this to be a positive influence. He says most of the people willing to make the effort to get to Three Forks are the types that appreciate the environment. A good indication of this is that very little litter is ever found around Three Forks.

"I like it just the way it is," Dillard said. "I hope it stays that way forever." ■



FIELD DAY SCHEDULED FOR 100-COUNTY AREA

A massive Land-Use and Forest Management Field Day scheduled for the first Friday in May on a 2,500-acre Emanuel County farm is expected to draw a large number of landowners from approximately 100 counties.

Forester Chip Bates of the Commission's Statesboro District, one of the key planners for the first event of its kind in the area, said the Commission will be joined by the Soil Conservation Service, Department of Natural Resources, forest industry and several other agencies and organizations in staging the field day on the M. F. M. Partnership property - better known as the Morgan Farm - ten miles north of Swainsboro from 9 a.m. to 5 p.m. on May 3.

The event, to be conducted in conjunction with Swainsboro's popular Pine Tree Festival, will include hands-on demonstration sites set up on a circuit with speakers who are expert in their particular field to be on hand at each station to answer questions. Discussion topics at the various presentation sites will include wildlife, timber production and management, water quality, and recreation. Some of the specific topics will be Tree Planting and Herbaceous Vegetation Control, Wildlife Food Plots, Loblolly Seed Tree Regeneration, Sawtimber Management for Pine Stands, Urban Forestry, Pine Straw Harvesting, and many more.

In explaining the benefits landowners should derive from attending the field day, Bates said "our past history in Georgia has shown that we have made considerable advances in our knowledge and ability to manage our forest resources. We have moved from a philosophy of cut and get out (removing the timber and not replanting) to intensively managed forest with computer projections of the optimum time for timber rotation to bring the maximum economic yield. The average landowner does not have access to such sophisticated equipment and must rely on sound advice from professional foresters and good common sense."

Many valuable door prizes contributed by industry and business will be given throughout the day and a tram system will be in operation to transport persons from one exhibit to another. The name of a prominent speaker to address the opening program for the day will be announced soon.

Admission to the field day is \$8.00 (which includes a luncheon) if registration is made on or before April 26. After that date, the admission will be \$10.00. For registration or additional information, contact Forester Bates or District Forester Dan Gary at the GFC District Office, Statesboro (912/764-2311).



LIVE OAK DISTINCTLY SOUTHERN

LINKS GEORGIA WITH ROMANTIC HISTORY

By Paul Butts

The spreading live oak is symbolic of the romantic Old South and was an ideal species to be designated the official State Tree of Georgia.

Much of the literature stresses the fine appearance and historical aspects of this distinctly southern tree. It is capable of producing a massive growth, and many individual specimens are noted for having been the site of some historical event, such as the signing of a treaty or other important paper. Many years later, the tree continues to be a living reminder of the occasion, and the surrounding community takes pride in their historic landmark.

The stately live oak, with its thick, dark green leaves and sturdy trunk, was named Georgia's state tree in 1937 in response to a request by Daughters of the American Revolution. The tree is immediately associated by most people with the coastal area of the Southern United States; in Georgia, the historic City of Savannah is known for the majestic oaks

that line many of its streets and parks. The range of the tree and its several recognized varieties is from Southeastern Virginia, along the Atlantic and Gulf coasts, through South Georgia, Florida and Texas, with some occurrence in Oklahoma, Northeastern Mexico, and Western Cuba.

While some important examples are known to be several hundred years old, under good conditions the tree can make a growth rate that is equal to or better than that of other hardwood species. Around Savannah and in several other areas, the tree will also occasionally assume an



upright form similar to other hardwood species.

The Georgia champion live oak is at the Baptist Village in Waycross. It is 30 feet and five inches in circumference, 86 feet tall, and has a crown spread of 143 feet. This tree has 487 credit points, as compared to the national champion in Lewisburg, La. which has 527 points. The Georgia tree is taller and has a larger crown spread, but does not win the national title because of its smaller stem size.

Live oak is an evergreen that is classed in the white oak group. Its dry wood weighs 55 pounds per cubic foot, as compared to 42 for red oak, 38 for other white oak, 37 for longleaf pine, and 26 for yellow poplar. As wood strength is approximately equal to density, one can see that the wood of this species is very strong.

Since live oak was considered superior to other species for ship building, the United States Government in the early 1800s set aside live

oak reserves for exclusive use in building military ships. In 1827 the establishment of a live oak plantation was approved, and acorns were planted near Pensacola, Florida. The oak plantation later became the focus for political controversy, and it was abandoned.

In 1794, Congress authorized construction of six frigates and one of these, the Constitution, is now the oldest naval ship on active duty anywhere in the world. The Constitution was made in part with live oak from the Georgia Coast.

One reason live oak was so important in the construction of the old sailing vessels was the builders' ability to locate giant timbers with just the right curvature for making parts. Such members were of superior strength, as they contained no cross-grain like conventional timbers would have.

Although once an important tree for building wooden ships, live oak is usually considered a non-commercial species today because of its spreading growth, high density, and corresponding difficulty in drying and manufacturing. Many modern hardwood uses, such as furniture, do not require the strength, weight, and other characteristic extremes that made this species so important

through the mid-1800s. Also, the restricted size of modern building lots does not encourage its planting as a shade tree.

It seems that some research and selective breeding might take advantage of live oak's unique qualities, and once more turn this species into a highly desirable tree in Georgia.

No city in Georgia treasures the live oak more than historic Savannah. The area's appreciation of the tree dates back to 1733, when James Oglethorpe and his crew came upon the river bank where the city now stands and declared that no tree could be cut in the "Colony of Georgia" without special permission.

The Constitution, shown at anchor with the skyline of Boston in the background, was constructed partly of heavy live oak timbers from the forests of coastal Georgia. Construction on the vessel was authorized in 1794 and today it is the oldest naval ship on active duty anywhere in the world, according to the Department of the Navy.

The graceful oaks are prominent today along the city's principal avenues and in its public squares. The Savannah Park and Tree Commission has stood guard since 1896 "to maintain, improve, and sustain the excellent health, safe condition, and aesthetic beauty of all trees within the city..." Today, Dr. Don Gardner is the sixth director of the organization and he is striving to prolong the life of some of the trees threatened by negative urban influences.

The public regard for trees in the city was shown in the late 1970's when plans were announced for a street-widening project that would remove many majestic live oak trees. A protest group was quickly formed and several persons chained themselves to the threatened trees to halt their destruction. Today, 200 live oaks still stand along that thoroughfare as a result of their protests.

The tourist trade pumps more than \$175 million into Savannah's economy each year and city boosters are convinced that the tens of thousands of visitors are as intrigued with the 11,000 spreading live oaks and other trees as they are with the historic architecture and other charms of the coastal city.





LARGE LONGLEAF PLANTING BEATS THE ODDS

TREE FARMER'S SUCCESS ENCOURAGES OTHER LANDOWNERS

It's been almost four years since Clarence Curry planted about a half million longleaf pines on 522 acres of Tattnall County sand too poor to support any other crop.

Skeptical neighbors knew Curry had three strikes against him - the soil, the drought and the species - when he made his planting on the recommendation of Commission Forester Willard Fell, and they have been anxious to know the outcome of his folly.

Well, the verdict is in and the land-

owner and the forester are extremely well pleased with the survival rate and rapid growth of the showy, dark green trees that are now well over Curry's head in height in some sections of the plantation. "We did have some survival problems with the initial planting," Fell admitted, "but we had drought that year and the irrigation system that was left on the field after the landowner abandoned row crop farming just didn't give us the moisture that rain would have provided." He said

scattered areas had to be replanted the following winter.

Curry, well known around Reids as a former wholesale gasoline distributor, timber buyer, farmer, and bank director, said he decided to become a tree grower "after that first year I farmed and lost \$30,000." During a recent inspection of his trees, he commented that planting longleaf was "the most logical thing to do with that old sorry land."

Curry was fully aware of the c-

Planting longleaf was "The most logical thing to do with that old sorry land"

difficulties often found in getting planted longleaf seedlings through the grass stage. The forester explained to him that the long-rooted tree had to be carefully planted and even then there were regeneration problems that affect survivability, but he elected to take the chance and make one of the largest plantings of the species in the state.

"His success has encouraged other landowners in this area to plant longleaf," said Fell, "and now we have four or five growers who have already planted and others who will plant next season for a total of several hundred acres."

Wayne Belflower, who now heads the Flint River Nursery but was with the Walker Nursery near Reidsville when

Curry planted his trees in 1989, said he remembers the tree planting vendor stopping by almost daily for several weeks to pick up about 10,000 fresh seedlings each time to plant the following day. He said he had an occasion to visit Curry's place about three

months ago and was pleased to see how well the longleaves are growing.

Longleaf pine, long recognized for its quality, was once a major species in Georgia and the South and its heavy, strong, coarse-grained wood made it a favorite for construction purposes and the source of a large percentage of the state's naval stores. The growth of longleaf waned after railroad loggers swept across the timber belt early in the century, leaving millions of acres of "stump orchards." Most of the virgin stands were cut by 1930. Second growth longleaf has not been able to compete effectively with fast growing slash and loblolly pine.

Lynn Hooven, chief of the Commission's Forest Management Department and a member of a committee



Other page: Forester Willard Fell examines a rapidly growing longleaf pine on the property of Clarence Curry. Below, the forester and Curry look over planting records and discuss the success - as well as the problem - in growing the longleaf.



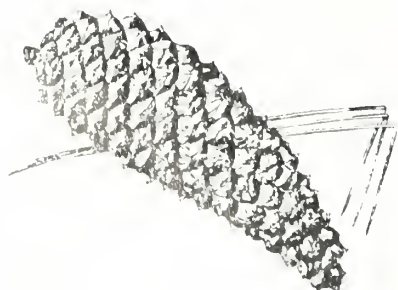
involved in longleaf research, said "the longleaf is a very sensitive species and it has been found that one way to lessen the shock of transplanting is to get the seedling into the ground as soon as possible after it leaves the nursery." Forester Fell said he is advising growers in his area to "plant the very day it is lifted from the nursery bed."

Hooven said research has also shown that the size of the root collar on the seedling is critical in selecting planting stock. "The ideal longleaf seedling should have a root collar not less than 3/16 of an inch in diameter," he explained. Johnny Branan, chief of the Commission's Reforestation Department, said longleaf is carefully graded at the state nurseries and most seedlings shipped out have about a one inch root collar.

ALL SEEDLINGS SOLD

Branan said "we sold all of the 1.3 million longleaf seedlings we grew this season and our crop of 2 million last year." Although that represents a small fraction of the many millions of slash, loblolly and other pine species produced by the nurseries, Branan said the Commission could greatly increase production if demand warranted it and seed were available. "Right now," he said, "we're having a hard time finding seed. Few seed orchards offer longleaf seed and those found in the wild are extremely scarce."

Hooven said some experimentation includes planting containerized instead of bare root seedlings and planting in the fall instead of the winter. "There is a lot of interest among many landowners and professional foresters in the production revival of this superior pine in Georgia," Hooven said. "We feel research will eventually solve the problems that presently prevent us from reaching that goal."



EXCERPTS FROM

THE HISTORY AND POTENTIAL OF LONGLEAF PINE

By Thomas C. Croker, Jr.

The longleaf pine story is a fascinating saga of southern history. It begins in the virgin forest which was open and parklike. The virgin forest dominated some 60 million acres of the southern landscape. Foresters estimated that the original stands contained over 400 billion board feet of the strongest building material in America.

These forests provided many of the necessities of life for the woodland Indians: fuel for warming and cooking fires; torches, and building material for lodges and other structures.

The first white men to enter the longleaf forests were Spainards in search of gold. Escapees from the herds of hogs they brought along are the ancestors of the razorbacks that have been such a scourge to longleaf pine seedlings.

English pioneers that came to the East coast were seeking home sites instead of gold. These forests furnished them material to build homes, other buildings, and fences, as well as open range grazing for their livestock. Imitating the Indians, they set fires to control movement of cattle and maintain the open character of the forests. The first commercial enterprise of the European settlers was the production of pitch and tar from longleaf pine heartwood. Later living trees were tapped for their gum which was distilled to produce rosin and turpentine.

The first mills were powered by water. Besides sawing lumber, they ground corn and cleaned rice.

As the nineteenth century waned, strange sounds were heard in the longleaf forest. The scream of locomotives, the din of power skidders dragging logs to the railroad siding, and the chant of track-laying crews signaled the start of a new era. The railroad loggers had come south to harvest a bonanza of yellow pine timber.

In the scurry and bustle of the times, little thought was given to growing a second crop of timber.

The Great Depression plumbed unusual depths in the land of the longleaf pine. Banks and businesses dependent on the mills failed. Suffering was most acute among the forest workers left behind when the mills cut out.

Into this dismal picture a wilderness army of young men came bringing renewed hope. The CCC established many 200-man camps in the longleaf belt. Large tracts were fenced against the destructive razorbacks, millions of seedlings were planted, roads and towers were built, and wildfire was suppressed.

The CCC was an important milestone in the longleaf pine story but there was another development of equal importance. In the thirties the battle between the prescribed burners and the fire exclusionists reached a showdown. After researchers of the Southern Forest Experiment Station confirmed the value of controlled burning, the practice gradually spread throughout the longleaf belt and later to other forest types.

Like the fabled phoenix bird, a second forest arose from the ashes of the virgin forest. Much restricted in acreage and often poorly stocked, nevertheless it began to contribute to the southern economy.

In the 1960's a modern day army of men and machines moved into the longleaf forest clearcutting and replanting with loblolly or slash pine. The second growth longleaf including some well-stocked stands are disappearing from the South at an alarming rate. There are two main reasons. First is the difficulty of regenerating new stands; and secondly, the slow initial growth of longleaf seedlings. However, recent developments suggest that this trend can be reversed.

PAULOWNIA

A NEW FORESTRY CASH CROP FOR GEORGIA?

A 77-year-old Gainesville entrepreneur, Jim Smith, believes the fast growing paulownia hardwood tree (*paulownia tomentosa*) offers attractive financial potential for Georgia growers. He is convinced of this in spite of the fact that there are no mature paulownia plantations in the United States and all U. S. paulownia profits result from cutting the species growing wild and exporting logs to Japan.

"There is a vast untapped market out there that has never been touched by this valuable hardwood, and I hope to be among the first to successfully promote it," Smith said. "The wood is strong, light, easy to work with, doesn't warp or split, and polishes to a satiny finish."

Native to China, the paulownia is believed to have been naturalized in the U. S. during the 1840s. The virtues of paulownia have been known for more than 2,000 years. A classical Chinese treatise published in 1049 A. D. offers detailed instructions on cultivation. The author, Chen Chu, suggests fertilization with extravagant amounts of dog manure. The tree is considered attractive for ornamental purposes and produces lavender colored flowers in spring. Paulownia is disease, insect, and fire resistant. The species is intolerant of shade and grows best in direct sunlight.

Smith bases his theory of a potential U.S. market on 12 years (1968-79) of growing paulownia in Brazil and exporting logs to Japan. A chemical engineer by profession, Smith graduated with a bachelor's degree in chemical engineering from West Virginia University in 1936. He said his knowledge of managing a paulownia plantation was derived from "educational mistakes" that he considers

valuable to the Georgia project.

The Japanese market opened for the U.S. in 1972 when a Japanese representative of Hokusan Lumber Company saw wild paulownia trees growing in Virginia. Paulownia wood has long been valued in Japan for its appearance, strength, and light weight (14.37 - 18.75 pounds per cubic foot/12% moisture). During the second century A. D., Japanese court musicians played paulownia wood harps (*koto*). As centuries passed, other Japanese paulownia products that evolved including water pails, clogs, rice containers, furniture, and dozens of household items.

Production of all these items continue in Japan. However, by 1984, Japan was using 81.5% of paulownia wood for furniture pieces and plywood paneling for furniture. The trend continues today.

"Before 1960," Smith said, "most of Japan's paulownia was grown there. But then they started having problems."

The problems Smith refers to were primarily those of intense competition for land use. Eventually, Japan was forced to rely on imported paulownia and the price fluctuated according to supply and demand. Smith said a paulownia nursery grower from Tennessee recently told him one 8 foot log sold for \$4,300. Rumors persist that in times of scarcity, some paulownia trees sold for as much as \$20,000 each. This may or may not be true, but prices did become rewarding enough to spawn a peculiar type of criminal - the paulownia rustler. These thieves would invade the lands of others and cut their paulownia. Often, the landowners were not very upset because they thought the thieves had cut a few cottonwood trees - which

resemble the paulownia and is considered to be of little value.

However, as time passed more landowners became aware of paulownia value, but most of them did not bother with cutting a few scattered trees. By 1984, Taiwan was supplying most of the imported paulownia to Japan (34%). Other suppliers included the People's Republic of China/mainland China (19.5%), United States (10.6%), Argentina (2.5%), Paraguay (3.5%), and Brazil (5.6%).

When Smith became interested in growing paulownia (1968), he owned the first factory in Brazil to manufacture polyester buttons. Having gotten this entrepreneurial project operating successfully, he was ready for another financial venture. The time and place for paulownia was right.

During a routine business trip to Sao Paulo, Smith saw a newspaper ad promoting "KIRI - THE MIRACLE TREE." (Kiri is the Japanese name for paulownia). Having had a small pine plantation in 1965, he was interested in tree farming and met with the sponsor of the ad - Cabreuva Construction and Land Development Company.

Smith was impressed and returned to the company several days later with his friend and future partner, Walter Marsh. They met with Cabreuva's technical consultant and agronomist, then visited two Kiri plantations.

Smith and Marsh were convinced. They formed a partnership and went into the paulownia business; but all was not a bed of roses - or even paulownia. Their first shipment of 1,000 root cuttings were dried out and useless. Cabreuva sent them a replacement ship and most of these failed to germinate.

"At this stage it was a learning process," Smith said. "We were deter-



nined and we learned well."

From the replacement shipment, Smith and Marsh managed to produce root cuttings from year old saplings in 1969. The trial and error procedure continued until Smith had refined the growing of paulownia to an art. From their frustrating beginning, Smith and Marsh emerged to export paulownia logs to Japan from 1973-79.

Other problems throughout the years included three droughts, inadequate knowledge of growing rate, and fires caused by careless neighbors; but the business prevailed with success.

In the early 1970's, Japanese buyers were competing to buy random length paulownia logs with IBSEDs (inside bark small end diameter) of 3 inches or more. By 1979, most of the buyers would only consider buying logs designated at "2.0 meters length and a minimum IBSED of 6 inches."

"Many of our trees would not meet these specifications," Smith said. "So since our lease was about to expire, we decided to cut the marketable trees and come out with a reasonable profit."

Smith said all 12 years of experience were valuable - especially the negative experiences. I know what to do and what not to do now," he said. "I know exactly how to approach this project in Georgia."

Smith's outlook for promoting cultivated paulownia growth in Georgia is optimistic, and he hopes it will mushroom into the national domestic market. For the past two years, he has been working with personnel in the Commission's Gainesville district on various aspects of his paulownia concepts. One facet of the project is an experimental paulownia plot at the Commission's Dawsonville unit. This growing area will be carefully

monitored for a number of research studies.

In addition to his other research, Smith attended a recent paulownia seminar sponsored by the University of Kentucky and University of Tennessee. Smith said these two states -and Maryland - have shown a great deal of interest in growing paulownia.

"There are also tracts of Japanese owned paulownia now growing in the U. S. - if that tells us anything," Smith said. "They (the Japanese) are very skillful at making a profit and it would be strange if the idea of a U. S. market had not occurred to them."

Smith said the Japanese prefer logs cut from slow growth trees, DIB (diameter inside bark) of 10 inches and minimum length 8 foot logs. However, a slow growing paulownia would be very fast compared to other hardwoods. Research from some sources indicate that a U. S. paulownia crop would be ready for harvest in 14 years. Smith prefers the conservative estimate of 20 years for a crop of Georgia paulownia, but only time will tell.

GROWTH CONTROL

Current log tables defining paulownia log grades in relation to growth rate emphasize that growth should be controlled to produce logs of marketable quality - but with consideration of a time frame geared to economic viability and required investment.

However, paulownia not meeting high quality export standards could be used for many other purposes including bedding for dairy farms, chicken house litter, and even experimental pulpwood for making paper.

"You could go on and on with possible uses for paulownia," Smith said. "Off the top of my head, one that comes to mind is air freight crating. It's light and strong, so it would be a natural. But I see the main possible U. S. market as furniture."

So far, U. S. furniture makers have shown no interest in paulownia - despite its beauty, strength and lightness. The main turnoff has been price. Smith believes that paulownia has not been properly promoted and that a sufficient number of growers will create competitive pricing to stabilize cost. He also believes that public demand for paulownia furni-

ture will be established with public awareness of quality and beauty.

Some sources believe exporters have apparently been able to limit volume and maintain high prices. Smith suggests that successful large scale cultivation would eventually produce high quality trees and wood at lower prices.

PRICES AND PROFITS

In the 70s, paulownia prices were quoted as being competitive with black walnut, but Smith points out that comparisons change. Based on past experience, Smith suggests that a Georgia paulownia plantation could produce 16-foot logs averaging approximately 18 inches DBH (diameter breast height) on a 20-year rotation plan. He emphasizes, for example, that this would be a well managed 300 seedling per acre planting density - yielding from 100 to 150 mature trees after periodic thinning. He believes competitive pricing would stabilize cost at approximately \$2.00/BF.

The return from such a hypothetical plantation would obviously vary depending on soil quality, labor costs, site preparation, etc. However, Smith projects a yield of 12,000 BF/acre valued at \$1.50-\$2.00/BF and a 7.75% capital cost (average annual cost of capital invested over 20 year rotation). He said a conservative estimate indicates a discounted net return in the \$3,000 to \$4,000 per acre range.

Smith said the estimate does not include additional potential return if logs are sold as two 8-foot sections instead of single, lower yielding 16-foot logs. He also emphasized that the estimate does not include the probability of obtaining second harvest of marketable logs from the original stump.

"This is another plus factor of paulownia that you have to see to appreciate," Smith said. "Paulownia comes back very well from the stump."

PROS AND CONS

One thing that bothers even a stalwart advocate of paulownia like Smith is the mail order sort of hype that has sometimes been used in promotion. Even in Smith's first 1968 Brazil encounter, paulownia was described in the ad as a "miracle tree." Whether or not the tree is a "miracle" depends on one's concept of the miraculous.

(continued on page 23)

Georgia Forestry/Spring 1991/19

ALL PHOTOS FROM JIM SMITH'S PAULOWNIA TRFF FARM IN BRAZIL 1968-79. From top left to right: (1) Paulownia seedlings two months old. (2) Saplings six months old. (3) Back from the stump eight months old. (4) Area with five year old trees. (5) Harvesting tree six years-four months old. (6) Seedlings being prepared for shipment.



BONSAI

FOREST PATROLMAN PERSUES DEMANDING, METICULOUS ART

By Howard Bennett

When it comes to trees, big is not better! At least not to Forest Patrolman Mike Payne when he is engrossed in his favorite hobby.

A full grown red maple 18 inches tall or a four-year-old hemlock crowning at two feet are ideal sizes to Payne, who is into the fascinating hobby of bonsai, the art of dwarfing

and shaping trees and shrubs through meticulous pruning and controlled fertilization.

Payne has been plowing firebreaks to help protect Union County's big trees from forest fire for 15 years, but weekends and many other off-duty hours often find him in his greenhouses busily pruning, wiring and otherwise tending to some 35 minia-

ture trees to shape them into flowing lines and arresting forms that characterize the true bonsai.

The patrolman's interest in bonsai started when he was studying forestry and ornamental horticulture at the North Georgia Technical and Vocational School in Clarkesville. "A fellow student, who had spent four years in Japan and became acquaint-



d with bonsai in the country where it was first developed, introduced me to the art," said Payne. "He invited me to his home to see the trees he had cultivated over the years. That was 20 years ago and I've been hooked ever since." He also became hooked on a girl named Barbara Brackett who was in his class and later became his wife. She was also interested in bonsai, but "does not pursue it to the extent that I do," Payne said.

The ancient Japanese art of bonsai has been well known and appreciated in some areas of this country for about 35 years; it had been practiced much earlier on the West Coast where Japanese had settled and brought traditions and crafts with them from their homeland.

NATIVE TREES USED

It was once believed that the centuries-old dwarfing of trees had to involve Asiatic species to possess the true concept of bonsai and teachers of the art and most of the plants had to come over from Japan. It was believed that a tree didn't possess the suitable qualities unless it was a Japanese black pine, Japanese five-needled pine, Japanese beech or some other exotic species from the Orient. Payne and others have, of course, known for some years that many species native to Georgia and other states make excellent bonsai.

When the patrolman wants to add to his forest of dwarf trees, he visits the area nurseries for uniquely shaped trees that would make a good bonsai, roams the woods for the right kind of specimen, with son Scott, 11, and daughter Lena, 7, usually trailing along. Both children are interested in their father's hobby and have a miniature tree of their own.

Payne has found that his hobby has worked well "in telling the forestry story" for the Union County Forestry Unit. He said his bonsai is an immediate attention-getter when he takes some of his trees to a public school for an Arbor Day or Career Day program. In displaying the tiny trees, he shows their full size counterparts out in the woods and how the Commission strives to protect the county's forests from fire, insects and diseases; it provides an opportunity to tell of the patrolman's role in reforestation and other services.



Forest Patrolman Payne, above and on opposite page, carefully shapes two of his many prized bonsai trees at a work area just outside his potting shed at his home near Blairsville.



The patrolman can always expect adult visitors to his country home ten miles west of Blairsville to view his collection after each school presentation. "The students tell their parents and they come out to see for them-

selves," he said. "I'm always pleased to show the trees to anyone who is interested."

Some trees cultivated by the Japanese are very old and extremely valu-



able; many are handed down from one generation to another and in most cases the owners would be insulted if they were asked to sell their treasured bonsai. Payne seems to hold to that philosophy as he has several beautiful trees of significant value, but he has never sold a bonsai. "I become attached to them," he explained, "and they are something special that I would rather keep and enjoy."

Although a tree does not have to be old to be a successful bonsai, it should look old as possible. Payne and others who have the patience to follow the art achieve this by cutting off some of the lower limbs of the tree and causing others to curve downward through the use of wires, weights and ties. The technique eventually adds many years of appearance to the natural tree.

When Payne is out scouting for likely candidates for bonsai, he keeps his eye out for interestingly shaped juniper, maple, holly, spruce, hemlock, beech, gum and several other species. He shuns oak, poplar and other trees that have large leaves that cannot be sufficiently dwarfed. In bonsai, the leaf size must be proportionate to the rest of the tree. If he is fortunate enough to come across a gnarled tree growing out of a rock cliff, he can go home with an "almost instant" bonsai. The veteran hobbyist said "nature sometimes does the work for you and if you can lift the root system out intact, it can be trans-



A special wire is used to force limbs - and often trunks - to grow in a desired position.



The bonsai enthusiast begins to remove much of the soil and severely trims the roots of a pine he is transferring from a training pot to a shallow bonsai container.



Weights are often used to force limbs to grow downward or in a "weeping" position. Metal washers can be used as weights.

planted back home in a hollow rock or pot with little effort."

Payne usually starts his trees in "training pots" and after they attain a certain growth they are transferred to permanent bonsai containers, shallow trays that hold the minimum amount of soil and root mass necessary to keep the plant alive and healthy. It is said that choosing the right size, texture and color of the planting container is like selecting the correct frame for a painting. The planter should never detract from the tree.

The first literature on the bonsai technique translated into English from Japanese contended that the shrouded mystery of dwarfing trees depended on special soils found only in Japan. Hobbyist in this country readily found, however, that the information was incorrect and Payne said "every grower has his or her own preference in soil mixture and mine is sand, topsoil and little red clay for some species." He said his top soil is "pure humus from under a tree in the woods" and he often places green moss around the base of the bonsai to retain moisture and enhance the beauty of the tree.

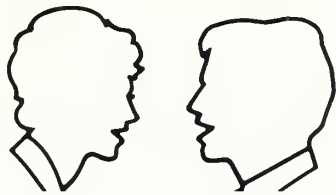
NEVER FINISHED

"You are never quite finished with a bonsai," Payne said. "Once you get it initially pruned properly and shaped the way you want it and the fertilization regulated, you have to take it out of its container about every third year, trim the roots and replant it in fresh soil. Periodic minor pruning and watering never end."

A tree must pass severe tests to qualify as a true bonsai, a perfection the Japanese call *Gei*. The word has no English translation, but Payne said it means a harmonious blending of all elements of the tree and its planter into a whole that could be compared to a fine sculpture, an *objet d'art*.

Forest Patrolman Mike Payne has other interests. He works with his father in a family-owned sawmill and he is Sunday School superintendent and teacher at his church, but when there is free time, he turns to his miniature forests out in his backyard greenhouses where he masters the ancient art of bonsai and attempt to achieve *Gei* with each new tree.

PEOPLE



In The News

secretary EDYTHE T. LEE of the Rome District has retired after 21 years of service with the Commission. A native of Floyd County, she graduated from the local high school and Carroll Lynn Business School and worked for several companies before becoming Rome's district high school secretary, a position she held for 13 years. She has a son and daughter and four grandchildren. The



LEE



CORBIN

retired secretary and her husband, Bruce, will continue singing in the church choir and do some traveling. ...HERYL CORBIN, a native of Rome, is the new Rome District secretary. She is a graduate of Coosa High School and is studying business administration while taking night classes at Floyd College. She previously worked with the Floyd County Extension Office. The secretary and her husband, Tim, attend Fellowship Church in Rome...JOHN C. BERT has been appointed vice president and general manager of the



ALBERT

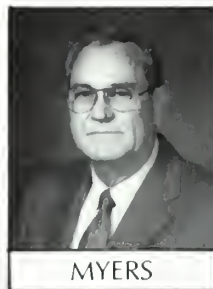


ALLEN

Forest Resources Group, Union Camp Corporation. He replaces J. GREELEY GOWIN II, who will retire in August. Albert has responsibilities for the company's Woodland and Building Products operations...VERNON C. CUCH, Aircraft Maintenance Shop Superintendent, retired at the end of

December and was honored with a party in January at the Macon Moose Lodge. Crouch came with the Commission as its first aircraft mechanic 30 years ago...RON ALLEN, a Fourth District forester assigned to the Butts-Henry Unit since 1986, recently transferred to Macon to serve as forester specialist in the Forest Protection Department. Allen, who earned a degree in forestry from the University of Missouri, came with the Commission in 1983 and first served in the Meriwether County Unit as ranger...J. WALTER MYERS, JR. has been named adjunct assistant professor by the University of Georgia's School of Forest Resources. He assists in forestry policy instruction with undergraduate and graduate students, and has done so since 1988. He holds bachelor's and master's degrees in forestry from Louisiana State University, and is a past chairman of the Society of American Foresters Southeastern Society, and past national president of SAF...JOHN RADCLIFFE, Commission electrician, retired March 1 to end more than 35 years of service. Before his transfer to Macon office to serve statewide as electrician, Radcliffe had been forest ranger in the Crisp-Dooly and the Lee

County Units and worked in fire control in Fulton County. The native of Albany is an Army Veteran and member of The American Legion, Lions Club and the Baptist Church. Radcliffe and his wife, Glenda, will make their home in Leesburg. The retiring electrician, who has a daughter, Beth, was honored at a retirement dinner in Macon...FORESTER ARCHIE McEuen, who came with the Commission in

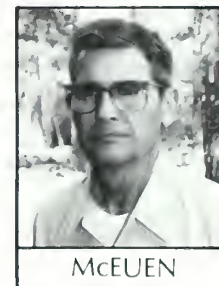


MYERS



RADCLIFFE

1959 just a few days after graduating from the School of Forestry, University of Georgia, will retire April 1. A native of Waycross, McEuen has served in several capacities and as reforestation forester in the Waycross District in recent years. McEuen, who served four years in the Navy and enjoys working with bonsai as a hobby, is active in the United Methodist Church. The veteran forester and his wife, Elizabeth, have four children, Margaret, Rex, Phillip and Ellen, and one grandchild. ■



McEUEEN

PAULOWNIA TREE

(continued from page 19)

However, the tree is a very fast growing hardwood that offers distinct possibilities for domestic and foreign wood markets. The question is whether or not this can translate into a stable and profitable market for Georgia growers.

Smith believes that a domestic paulownia market can be established and that Georgia can enjoy early benefits. He points out that paulownia is suitable for marginal land.

However, Smith's enthusiasm is tempered by memories of his early mistakes. He recommends caution to


anyone interested in growing paulownia. "Start off small and expand gradually," he advises.

After this year's last frost (mid-April), Smith plans to have seedlings ready for the Dawsonville experiment site. He also plans to offer consulting services concerning paulownia growth and establish a private nursery.

Some people might consider such a project to be overly ambitious for a 77 year old entrepreneur - especially looking forward to a 20-year tree crop maturing. However, Smith doesn't give it a second thought. He insists that he is in perfect health and that paulownia is his "mission."

"I have no plans for dying," he said.

For Your Information



When you report a forest fire in Georgia - anywhere and at any time, day or night - a dispatcher immediately alerts a fire-fighting crew to subdue the blaze. By means of a statewide radio-pager-telephone system, the Georgia Forestry Commission provides around the-clock protection for the state's woodlands. To report a fire, simply dial your county forestry unit. If it's after business hours, the call is automatically transferred to a central dispatch facility for proper response. The Commission appreciates the cooperation it receives from the public in keeping destructive forest wildfires to a minimum.



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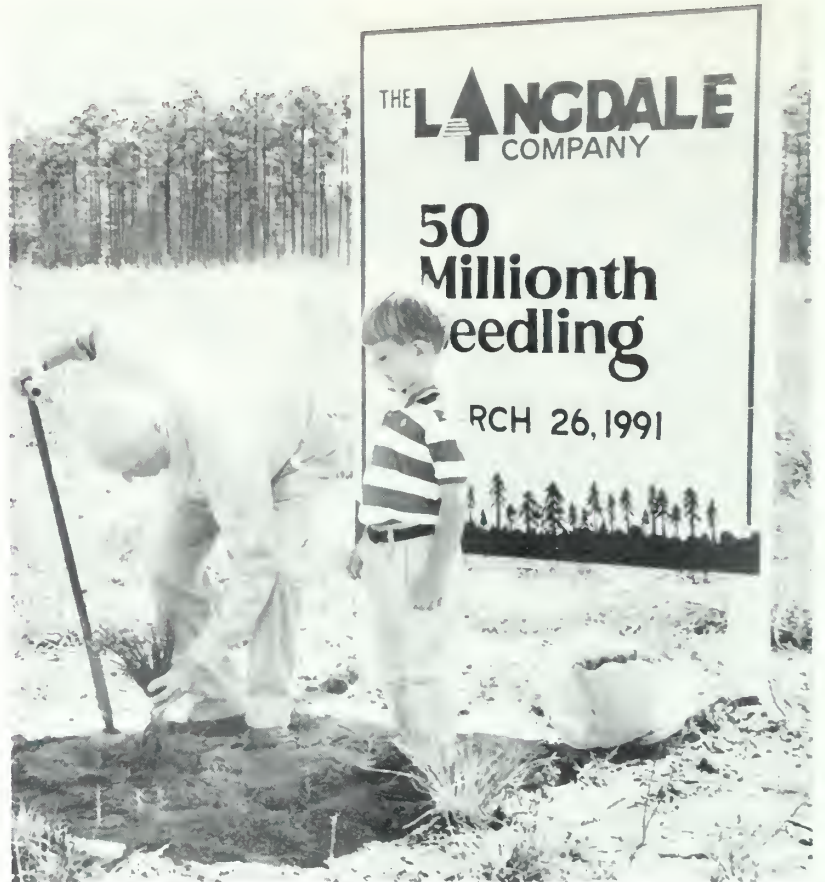
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Langdale packs soil around longleaf pine after it is planted by youngster.

LANGDALES PLANT 50 MILLIONTH TREE

The four-year-old great grandson of the founder of one of Georgia's largest and oldest forest products company carried on the long tradition of the firm recently by planting its fifty millionth tree.

The youngster, Robert H. Langdale Jr., was assisted by Harley Langdale, Jr., chairman of the board, The Langdale Company; and John M. Mixon, director of the Georgia Forestry Commission, in the brief planting ceremony on company land near Valdosta.

Company officials said the tree planting by the Langdale family began in 1931 when the elder Langdale used naval stores laborers to dig seedlings from the woods and transplant them in worked-out fields in Echols County. Today, The Valdosta-based company owns and manages more than 200,000 acres of South Georgia timberland.

The company, founded by Judge Harley Langdale, Sr., who died in 1972 at the age of 84, now operates five major manufacturing facilities and two treating plants, employing almost 1,000 people. The products include lumber, treated lumber, utility poles, marine piling, fence posts and oriented strand board.

Since 1894, the Langdale Company has managed its vast lands for timber production, agriculture and wildlife, and is an original "environmentally concerned organization," according to a company spokesman.

COVER PHOTO - A beautiful cardinal peeps out of heavy foliage. Cultivation of non-game wildlife is another aspect of modern forest management.

PROGRESSIVE FORESTRY CONCEPTS SPAN TWO BALFOUR GENERATIONS

Sixty-three-year-old R. C. Balfour, III, a prominent Thomasville landowner and lumber manufacturer, never in his life had to be sold on progressive forest management and conservation practices. He grew up with the concepts long before their importance was generally realized, or even recognized.

The influence was his father, Robert C. Balfour, Jr., a

Balfour land manager examines 100-foot wide corridor going through "Trulock Place." The 2,000 acre tract has numerous such corridors that serve as firebreaks and planting areas for various types of game.

visionary of sorts who died in 1979. He served as a lifelong role model for wise conservation and forestry management concepts. The elder Balfour was far ahead of his time in attitudes toward forestry and nature in general. His interests ranged from forestry to the values of American Indian tradition. Eventually, he wrote and published a book on the Thomasville area titled "This Land I Have Loved." As a small boy, he rode the first passenger train between Moultrie and Thomasville and remembered, "It was a beautiful sight to see one vast forest before man ever touched it."

However, before reaching his mid-twenties, he saw "sawmills placed every three or four miles to butcher great stands of timber without any thought of reproduction."

This was a time when timber was generally thought of





R. C. Balfour III, carries on his father's progressive and innovative forestry practices. The elder Balfour was ahead of his time in attitudes toward forestry and nature in general.

in terms of endless supply. The elder Balfour thought differently about this and other nature related topics. During that time, wealthy Northerners were buying large plantations around Thomasville. Although Balfour, Jr. had been thinking about forestry management techniques for several years, he actually launched his forestry career on one of these plantations when the landowners requested that one million board feet of timber be cut "without destroying the place."

The elder Balfour responded with a futuristic job of selective cutting so skillful that when the plantation owner returned he could not believe one million board feet of timber had been cut. The massive harvest crew had cut trees just above ground level with crosscut saws - all debris was then methodically burned or hauled away to leave a manicured pine forest.

That was the beginning of Balfour Industries as a proponent of conservation, reforestation and a style of selective cutting that was virtually unheard of in the 1920s.

TRADITIONS RESPECTED

Today, R. C. Balfour, III, carries on his father's forestry traditions as corporate executive officer for Balfour Lumber Company. The Balfour family owns 20,000 acres of timberland in five counties. Since the elder Balfour established one of the first private pine seedling nurseries in Georgia, the Balfours have practiced reforestation for many years to sustain multi-use forests that not only produce timber, but serve as areas for fishing, hunting, and a sporting clays course.

In addition to offering some of the finest quail hunting in the world (President Eisenhower hunted on the adjacent Greenwood Plantation), Balfour timberlands include Myrtlewood Plantation with a sporting clays course located on 3,300 acres of hickory, dogwood and

pine. Four Myrtlewood lakes, surrounded by tall pines, provide year-round fishing for bass and bream.

In contrast, the 2,450 acre Wildridge Plantation (owned exclusively by R. C. Balfour, III) is managed for quail hunting and timber production. Following in his father's footsteps, Balfour established a commercial quail preserve in 1984. The elder Balfour often entertained congressmen, senators and governors on the family's wooded game preserves.

All this keeps R. C. Balfour very busy. However, he recently came up with some forestry management innovations that he considers unique. "If anyone else has done this sort of thing," he said, "I don't know anything about it."

CHECKERBOARD CONCEPT

The multiple use management plan is being conducted on what Balfour calls the Trulock Place - a 2,000-acre tract supporting mostly mature pine stands. After careful examination of the tract, Balfour decided on something uncharacteristic of his - or his father's - forestry management practices. He decided to do extensive clearcutting.

"There were two reasons for doing this," Balfour explained. "First, the county the tract was located in had imposed a heavy tree tax. And second, many of the family members were in need of financial dividends."

But what seemed like just a big clearcutting operation for financial reasons did not turn out this way after Balfour invoked some of his father's innovative qualities. This was one of the "first pieces of forest land" his father had bought during the depression, so it was not without nostalgic value.

"It was decided to make a prototype of the place," Balfour said. "We cut approximately 90 percent of the mature timber and left only those stands with some promise of future growth. We deliberately made these cuts to create a "checkerboard pattern" which turned out even better than expected because the natural timber growth inclined the operation toward this pattern."

Balfour said the checkerboard pattern was for timber management, game management and aesthetic value. The probably "unique" aspect of this operation was Balfour's idea to leave "100-foot wide corridors running through the planted stands, joining the maturing stand together with areas of planted seedlings." Balfour's purpose in doing this was to provide huge firebreaks that would also serve as game management areas - the corridors could be planted with food for deer, turkey, quail or whatever.

"I know that a 100-foot wide firebreak is unheard of," Balfour said, "but I also know it is effective. I got some opposition to this idea from several sources."

The general gist of the opposition was that it was an unnecessary waste of land where more profitable pines could be planted. But Balfour, like his father had done so many times in the past, made up his mind and went on with his idea.

The concept turned out well. The land is now leased to a hunting club that plants the corridors with various types of game food. It provides income from hunting revenues, while the corridors serve as almost foolproof firebreaks in a very high risk area. Meanwhile, the maturing and recently planted stands continue to grow

oward profit.

"This was an unusual situation for us," Balfour said, "but you have to adapt and innovate according to what is needed. Clearcutting is a practice we use only as a last resort, but at times it is necessary."

Balfour said his usual objective in managing forest is to maintain as much uneven growth as possible; this provides long growing cycles and when only a few mature trees per acre exist and a clearcut is necessary - then reforestation.

"There's a lot of talk now about biodiversity," Balfour said, "but something the purists do not understand is that planting trees in rows does not make for a biological desert. Maybe for a few years it looks like that, but after your second or third thinning, ground cover is beginning to develop and the woods look more natural. And many stands are mixed leaf situations - with loblolly and longleaf having naturally seeded in with the slash plantings."

It is Balfour's opinion that a stand of planted pines

can develop biodiversity if selective harvesting is practiced on cycles of 40 to 50 years.

"We also feel that the long rotations are more profitable because higher grade products result," Balfour said. "The long rotation is particularly applicable to the Balfour operation since the company produces sawtimber, chipping sawlogs, and poles - in addition to pulpwood."

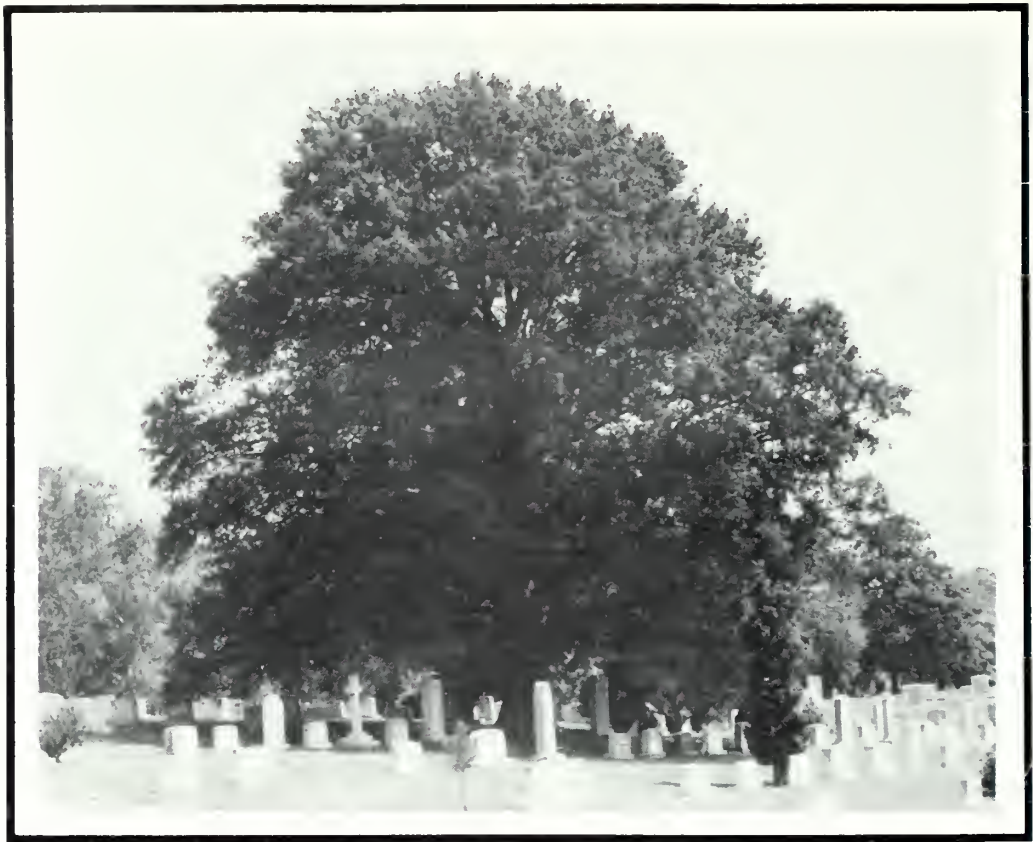
Some of Balfour's forestry concepts are carry-overs from his father's progressive ideas; but some - like the 100-foot corridors, are his own. So much his own, that he may be unique with this particular "Trulock Place" management program.

Balfour's father ended his book by writing: "My aim has been to leave the land that was entrusted to my care in better condition than I found it. I hope that I will pass on to future generations, along with the land, that aim and dedication."

R. C. Balour, III and his father have that objective in common.



Buddy Highsmith, Balfour land manager who has worked with the family for 38 years, points to an area on the map receiving special attention. Balfours use the checkerboard pattern for timber management, game management, and aesthetic value.



FORESTRY PROBLEMS PLAGUE HISTORIC WESTVIEW CEMETERY

Trees in Atlanta's historic Westview Cemetery - although cared for with great concern - run the risk of untimely demise. Lightning is the main threat. During the past five years, Westview has lost approximately 125 trees; more than a third were killed by lightning.

This high mortality rate indicates specialized forestry problems confronting the nationally known cemetery that has more than 80,000 interments.

"Lightning takes out a lot of our trees," said Westview President Charles E. Bowen, Sr., "but then there's also tornados, windstorms, disease, old age, and past damages that finally get the tree."

However, isolation of large trees on Westview's elevated landscape make them a natural target for lightning. Some trees have been struck by lightning as many as three times, which renders void the notion that lightning does not strike in the same place
6/Georgia Forestry/Summer 1991

By Bill Edwards

twice.

In one case, the theory was contradicted in an even more emphatic manner. On a scenic hill overlooking the mausoleum, lightning struck and killed a large oak. The oak was removed and replaced by a sapling not much taller than a man's head; the small replacement was then killed by a bolt of lightning that stripped off a ribbon of bark from top to ground level.

"Lightning does take its toll at Westview," Bowen said.

Established in 1884 on a 577 acre tract, Westview's rolling hills have a variety of tree species interwoven among imposing monuments. Species include: red oak, magnolia, pine, water oak, willow oak, cedar, crab apples,

cunninghamia, ginkgos, and poplar. Annual loss of Westview trees may require new planting and replacement regular activities. In recent years, a cluster of 25 crab apple trees died unexpectedly, and more than 70 deodar cedars were killed by cold weather.

Bowen, who joined the Westview staff in 1952 and became president of the organization in 1974, is concerned with the health of all the cemetery trees, but has special interest in those he personally planted through the years.

A graduate of the University of Georgia, Bowen has a degree in business administration. Following graduation from UGA, he took numerous horticulture courses. Bowen's extensive knowledge of trees is a blend of academic and practical experience that has enabled Westview to manage the majority of its forestry needs.

Remembering his early years at Westview, Bowen recalls many problems that have since been dealt with

Westview Cemetery President Charles E. Bowen, Sr., and Charles Bowen, Jr., vice president, examine small oak that disproves theory about lightning not striking in the same place twice. The young oak was struck and killed shortly after it had been planted to replace a large tree that was also the victim of lightning. Westview's isolated trees on an elevated landscape make them a natural target for lightning.

one way or another. "For instance, we used to take trees out of the woods and replant them," he said, "but there was a poor survival rate. We corrected that, but then made the mistake of planting the wrong kind of trees."

The "wrong kind," Bowen recalls, does not refer to a geographical mismatch, but in appropriate species for a cemetery. "We were planting these little flowering trees that only look good for about one month out of the year," Bowen said. "When we got past that stage, we started to get on the right track."

Bowen still goes into the woods to get some trees for planting. However, economics now require that trees for planting be purchased to sustain the 95 percent survival rate and basic changes have occurred. One major development is that Westview has evolved into a cemetery with a lot of water oak clusters. Bowen points out that water oaks "make a good showing" the year round and are ideal for stabilizing the scenic value of the cemetery.

"A cemetery goes through phases of different projects," Bowen said. "Tree projects are one of these phases. Of course, there are the daily interments and routine lawn care, and other things; but forestry management at Westview is also a major concern." Bowen estimates that 20 percent of the cemetery's working schedule is devoted to forestry concerns. Activities include pruning, tree removal, and planting.

All things considered, Westview has fulfilled the aspirations of its originators. The site was of historic significance even before the 1884 establishment. Only 20 years before, part of Westview's grounds were the site of the Civil War battle for Ezra Church.

Touring the area in 1884, Edgar P. McBurney told an Atlanta reporter: "...this will be a park...and the men



Deodora cedar is carefully removed from among tombstones. More than 70 deodora cedar trees were wiped out by a severe cold spell. Westview's specialized forestry problems make removal and replanting regular activities.

There is the desire of some people to be buried under a certain tree. However, if the plot is located near the roots, interment in the area could kill the tree. Burials in such areas have to be discouraged.

who have it in charge intend to give Atlanta a cemetery that will be the admiration of visitors for years to come...we will have a landscape gardener who will be permanently employed to lay out and beautify the place."

Less than three months from the date of Westview's first burial, the Georgia General Assembly passed an act stating: "...drunkenness, indecent or lewd conduct, or behavior are hereby prohibited in Westview Cemetery and within one-fourth of a mile of the same in any direction." This policy was emphasized by policemen patrolling the grounds around the clock.

It soon became obvious that Atlanta took its new cemetery seriously. The trend continues today with tight security and emphasis on scenic beauty. Forestry management was practiced in one form or another at Westview before the term existed. Now, however, methods have become more progressive.

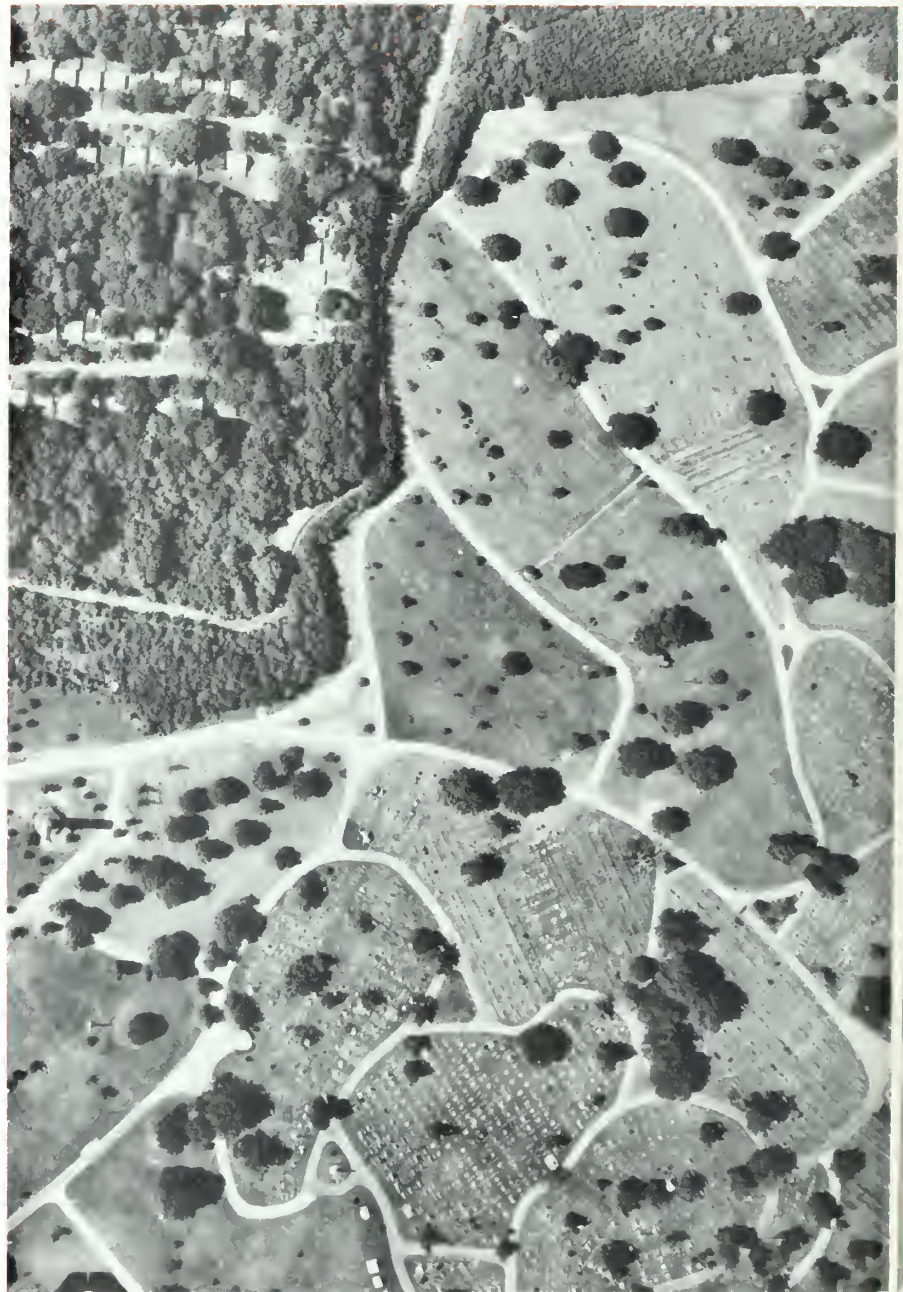
SPECIAL PROBLEMS

Despite progress, special forestry problems still exist. At one time, Westview even operated its own greenhouse, but the operation was phased out. Also, designation of burial plots have been changed because of tree proximity. This can be a delicate situation where the sale of lots can interfere with aesthetic objectives. However, a tour of Westview makes it obvious that this situation has been well managed.

There is also the desire of some people to be buried under a certain tree. However, if the plot is located near the roots, interment in the area could kill the tree. Burials in such areas have to be discouraged.

Then there are those forestry problems with no immediate solutions. For instance the last tornado that touched down in Westview damaged a number of large trees so severely that they had to be removed.

"No price can be put on this sort of aesthetic loss," Bowen said. "An 8/Georgia Forestry/Summer 1991



Aerial view of Westview shows dense tree growth. The historic Atlanta cemetery has lost more than 100 trees during the past five years - more than a third were killed by lightning.

oak tree 125 years old cannot be replaced."

Although Westview managed the majority of its forestry needs, outside assistance is sometimes required for trimming and removing large trees. However, on trees up to 15 years old, the Westview staff usually does all the work.

"This is done because we are cultivating growth," Bowen said. He added that shape and future health of many trees are determined by pruning and other care during this period of growth.

Only about half of Westview's original tract has been developed into sections for burial. As expansion continues, the staff plans for future forestry needs in relation to the concept of making Westview as much a landscape park as cemetery.

"We've bought magnolia trees by the trailer load and planted 250 oaks during the past three years," Bowen said, "This year alone we bought more than 300 pines."

FORESTRY PLANS

Forestry planning is continuous, with all indications that the next century will bring aesthetic results equal to those of the past hundred years. Through the years, Westview has become the burial place of an increasing number of well known Southerners including: Ralph E. McGill, Robert W. Woodruff, Joel Chandler Harris, Henry V. Grady, and William B. Hartsfield.

Frank L. Stanton (poet laureate of Georgia) is also buried in Westview. Stanton's aging tombstone, shaded by the thick green of a tall magnolia tree, has the following inscription: "This old world we're livin' in is mighty hard to eat/ You get a thorn with every rose/ But ain't the roses sweet."

If Stanton can look down at his final resting place, he should be pleased with Westview's forested landscape and serene aura. Westview has the sort of atmosphere that would appeal to the soul of the poet.



These two Westview oaks became victims of the weather. (ABOVE) Red oak broken off by windstorm near ground level. (BELOW) Although it took five years to die, a single bolt of lightning killed this well formed oak.



PIERCE COUNTY FORESTRY UNIT

It was one of the coldest, darkest nights of the winter when Terry Herrin drove his big crawler tractor into the Alabama River.

The Pierce County forest ranger is familiar with practically every acre of his native county, but on that unforgettable night—under the cover of darkness and fighting the chill of 18-degree weather—he failed to realize the river made a loop at a certain point and continued his forward drive in pursuit of a hot forest fire.

"You know how bushes and tall grass grow along a river bank," he said. "Well, I was following the bank of the river when I suddenly crashed through the brush at a bend in the river and when I didn't feel anything but air beneath the tractor, I knew I was in trouble!"

The ranger said the tractor fell about 12 feet "straight down" and plunged into eight feet of water. Luckily, the heavy V blade on the machine plowed into the river bottom mud and left the tractor on its nose, leaving Herrin in icy water up to his chest.

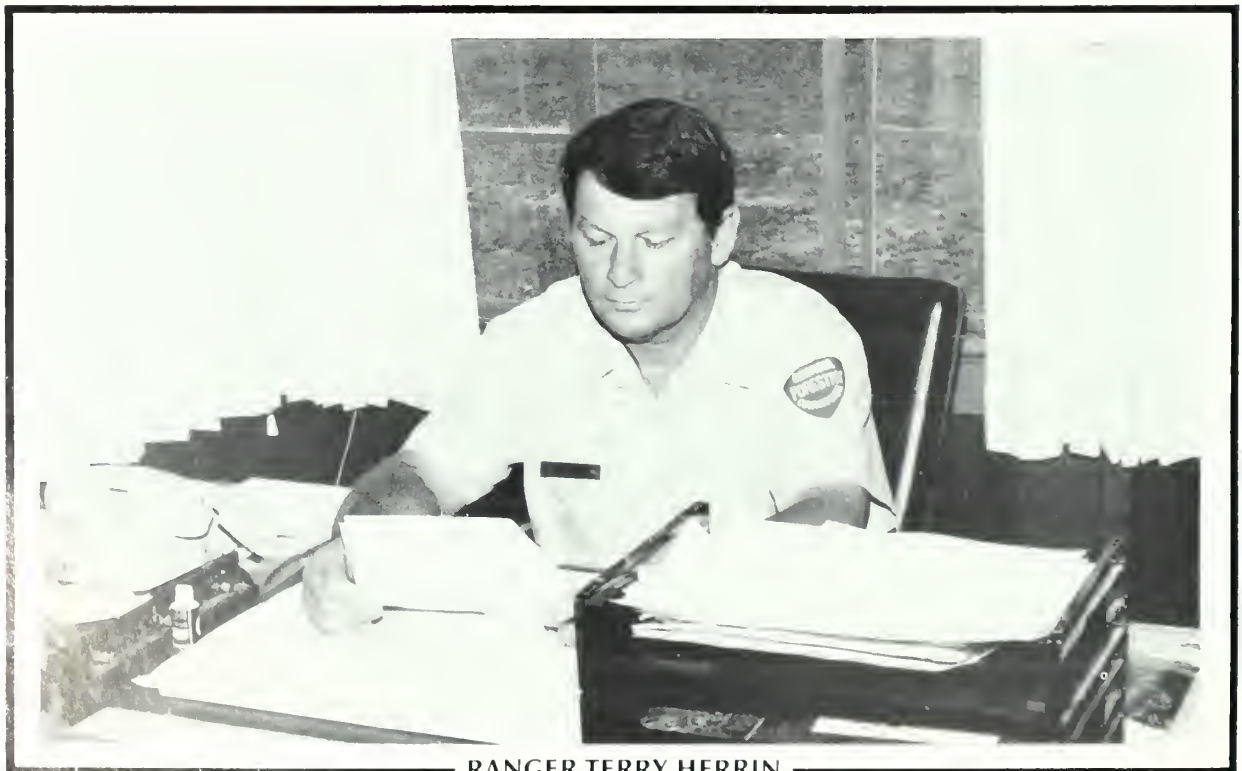
Fortunately, Herrin was being followed by a patrolman on foot who quickly summoned help. "The Lord was with me that night," said the tractor driver, who is a deacon at Laura Chapel Baptist Church. "If it had rolled over, there is no way I could have crawled out of that river." In looking

back at the experience, he recalled another miracle-like instance. As he was helped up the river bank, soaking wet and shivering, he said he spotted a nearby "fat lighter stump burning fiercely" and was able to warm himself until dry clothes could be brought to the scene by his wife.

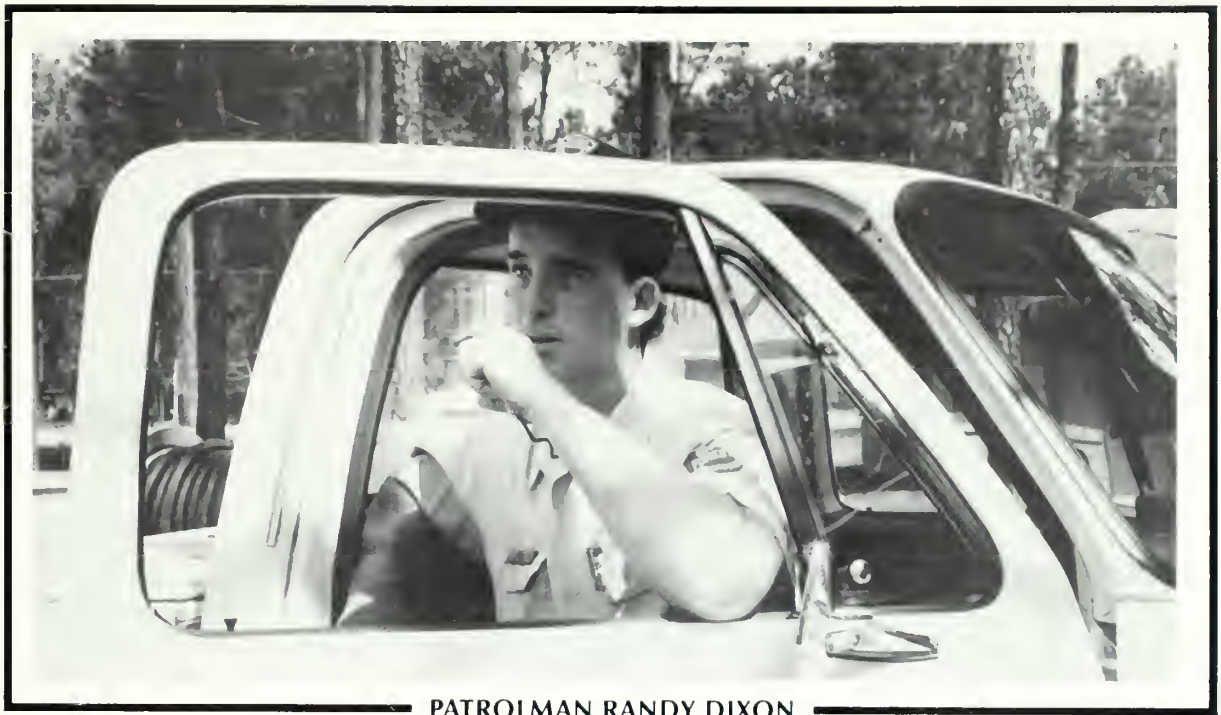
The river incident will be long remembered by Herrin, but it doesn't outweigh the many pleasant experiences he has known during his 18-year career with the Commission. The Vietnam veteran is often commended by his district office for his fire suppression record and his efficiency in equipment maintenance. He worked with heavy equipment in the Army and later in road construction in civilian life.

Herrin has been a key figure in organizing the annual Southeaster

**ANOTHER IN A SERIES
OF STORIES ON OUTSTANDING
COUNTY FORESTRY UNITS**



RANGER TERRY HERRIN



PATROLMAN RANDY DIXON

Forest Festival, which now attracts cooperation from many surrounding counties and visitors from a wide area. He works closely with the nine Rural Fire Defense units across Pierce County by helping acquire equipment, buildings and training.

Ranger Herrin and his wife, Mary Nell, have two sons, Eric and Clay. Herrin is president of the Band Boosters of Pierce County High School and is active in the local Lions Club.

YELLOWSTONE FIRE

"We were on the line fighting fire with shovels and pulaskis on a steep mountain slope when rocks began to rain down upon us," said Randy Dixon, who has served as patrolman in the Pierce County Unit for almost three years. "It was very dangerous, but it was also a unique experience."

Dixon, who grew up on a tobacco farm near Blackshear and graduated from Pierce County High School before earning an associate degree in forestry at Abraham Baldwin College, had joined other Georgians to help battle the big Yellowstone National Park fire in the summer of 1988. He

"You can always depend on them for top performance no matter what," said Waycross District Forester Joey Hall when asked why he rates the Pierce County Forestry Unit the most outstanding in the district. "We have other efficient units," said Hall, "but our people in Pierce seem to stand out in all areas of activities."

said firefighters on a higher elevation of the mountain apparently dislodged some stones that set off a rock slide that threatened a 20-man crew he was with down below. "We all managed to dodge the rocks," he said, "except one man who ended up with a broken leg."

Although fighting fire in the rugged mountains was an adventure, the patrolman said he prefers the down

home style of battling a blaze - that is, doing it with a tractor and on the flatlands of his native county.

The patrolman came with the Commission after working with the Okefenokee National Wildlife Refuge, where he scaled timber and participated in fire control. Ranger Herrin said "he was extremely well qualified when he came with us."

Patrolman Dixon and his wife, Kathy, and son, Clark, attend First Baptist Church of Blackshear.

NO FEAR OF TOWER

"They told me to climb up that tower and see if I liked it," said Pam Brooks. "I climbed to the top on that February day and it was one of the windiest days I've ever known. That tower was really rocking."

She was remembering a day 14 years ago when she came to the forestry unit in Patterson to apply for the job of tower operator. When she came down from the 110-foot tower and announced to the ranger that she wasn't the least bit frightened by the height or the sway of the tower, he promptly hired

her.

Brooks said she thoroughly enjoys her work and describes the cab of the tower high above the Pierce County landscape "a very peaceful, serene place to be." In wet weather and on other occasions when she is not needed in the tower, she serves as dispatcher and clerk in the unit office.

The tower operator and her husband, Dan, have two daughters, Mandy and Meranda. The family attends Patterson Baptist Church.

HIGHLY COMMENDED

"You can always depend on them for top performance no matter what," said Waycross District Forester Joey

Hall when asked why he rates the Pierce County Forestry Unit the most outstanding in the district. "We have other efficient units," said Hall, "but our people in Pierce seem to stand out in all areas of activities."

He said the unit personnel are always quick to do what is asked of them and there are never excuses or complaints. He also commended the unit for cutting operating costs whenever possible, while continuing to function at top efficiency.

The district forester said Ranger Herrin and his personnel "work extremely well with landowners throughout Pierce County and their devoted service sets them apart."



TOWER OPERATOR PAM BROOKS

ASSOCIATION OBSERVES GOLDEN ANNIVERSARY

W. M. Oettmeier, A Fargo landowner, was attending a meeting sponsored by the U. S. Forest Service in Washington, D. C. back in 1939 when he looked around the room and discovered that every forestry interest was represented except the private forest landowner.

Upon returning to Georgia, Oettmeier started contacting friends and acquaintances in the timber growing business, urging them to band together in an organization that would represent southern timber growers. The first meeting to consider such an association was attended by Alabama, Florida and Georgia, Landowners representing a total land ownership of 1,006,000 acres. Soon afterward, on April 17, 1941, the first official meeting of Forest Farmers Association took place, with Oettmeier being named president.



Fifty years later (May 15-17) members gathered in the Florida city where the association was founded to mark a half century of progress in carrying out goals stated in the original minutes: To unify the great industry of timber growing and to give landowners political weight; To assist in improvement of forest practices, including fire protection, cutting practices and cooperation with state and federal governments to bring about better forest conditions.

In October 1941, the first issue of *Forest Farmer*, a mimeographed newsletter, was mailed to the membership. It was not until May, 1942 that it became a printed publication.

In 1950, the first *Forest Farmer Manual* was published to provide landowners in-depth information on the business of timber growing.

The recently held 50th anniversary meeting had the theme "Golden Anniversary: Reflections on the Past, Present and Future of Forestry in the South." Speakers included John A. Luke, president and CEO, Westvaco Corporation; Past President Herman Baggentoss, Tracy City, Tennessee; and Dr. Emmett Thompson, dean of Auburn University School of Forestry.



ANNUAL FFA FIELD DAY

Hundreds of Georgia high school students representing the top FFA Chapters in forestry skills competed recently in the annual state Forestry Field Day finals held at the Georgia Forestry Center in Macon. The Louisville High School Chapter (above) took top honors in the contest that called for skills ranging from selective marking and tree identification to seedling planting and standing sawtimber estimation. Teams tying for second place were Echols County High (Center Photo) and Harlem High School (Bottom Photo). Chapters across the state compete

earlier in the year in regional field days and the two top winners in these contests become eligible for the state finals.



COWBOY ON A FOREST TRAIL

**FORESTER POSSESSES THE HIGH ENERGY
AND PARTICULAR SKILLS TO EXCEL IN TWO PROFESSIONS**

By Howard Bennett



From Monday through Friday he's out there helping some landowner better manage his pine forest, but most weekends find him somewhere in the South thrilling crowds with his championship bareback bronco riding feats.

He is Forester Phil Broome of the Georgia Forestry Commission and the 1988 and 1990 bareback riding champion of the American Cowboy Association.

A couple of experienced rodeo participants back in his hometown of Rome introduced him to the rugged sport when he was a senior in high school. After several years of hard work and many bruises, bumps, broken ribs and a collarbone injury, he emerged as one of the most talented and professional bronco riders in the business, earning some \$8,000 in prizes annually as he juggles his time between the rodeo and his other profession, forestry.

Broome was following a family tradition by studying engineering at Georgia Tech when he said he suddenly realized one day that a career in that field would probably tie him to a desk. That's when he switched career goals and enrolled at the School of Forest Resources, University of Georgia. He came with the Commission in 1986 and is assigned to the Milledgeville District and works mainly in timber management.

The forester and his wife Marcia make about 70 rodeos each year by traveling in their pick-up truck with a camper shell that often serves as sleeping quarters. "My wife fully supports me," said Broome, "and that's what makes it possible for me to be active in the association. She does a

lot of the driving and helps me in many other ways." His wife and traveling companion also attends Georgia College in Milledgeville and plans to enter the teaching profession.

Broome uses most of his week-

The young forester's intensive involvement in rodeo "has not in any way diminished his effectiveness as a good, dedicated forester...he is overflowing with energy...doesn't know the meaning of time...always willing and eager to go out and work with a landowner at any hour."

*Bennie Bran
District Forester*

ends, holidays and annual leave time to travel in the 13 states that comprise the Southeastern Circuit of the Professional Cowboys' Rodeo Association and competes in as many events as time permits. He said a recent weekend went like this: "It was a South Georgia town on Friday night, a town in North Carolina on Saturday, then over to Hattisburg, Mississippi Sunday afternoon and back in Milledgeville in time to go to work for the Commission at eight o'clock Monday morning."

Broome is quick to explain that his bareback riding is serious business and definitely not a hobby. "It's

much too expensive and too time consuming," he said, "for it to be considered a hobby." Some of the prize money has to go for traveling expenses, entrance fees and the necessary gear for his performances. The rigging that is placed on the horse cost about \$300 and when the costs of chaps, spurs, gloves, hat, belts and other accessories are added, the well-dressed and fully equipped cowboy has shelled out about \$1,000. In essence, the bronco rider is in show business and he needs to be in expensive and color-

ful attire to please his audiences.

The rodeo champ said he is often irritated by animal rights groups that claim rodeo animals are mistreated. "These horses are valued from \$700 to \$10,000 and owners make sure they get the very best treatment," he said. "In fact, the owners insist that the riders follow rigid rules in adjusting the rigging to protect the animals."

Broome added that most of the horses live longer than the ordinary horse because of the special care show animals receive. "After all," he said, "a bucking horse only works

eight seconds a weekend!"

Bareback riders are required to stay on a lively, hard bucking horse at least eight seconds to qualify in the competition. The rider draws lots to determine the horse he will mount and he is always hopeful he will be roaring out of the chute on a high-spirited animal. If a horse is too tame, the rider gets a second draw.

The Commission's prize-winning cowboy drives out to Abbeville, Kansas twice each year - on Thanksgiving and Easter weekends - to teach in rodeo clinics attended by young





District Forester Bennie Brant, left, and Forester Broome study landowner requests at beginning of work day in Milledgeville area.

people anxious to get into the challenging sport. It's a grueling 18-hour trip in his pickup, but Broome said it's a very rewarding experience "to help teach the new people coming into rodeo, especially for safety sake."

The cowboy is also involved in the Christian Fellowship of Athletes, which holds worship services at the clinics, as well as rodeos around the country when they are held on Sundays.

Not unlike other strenuous sports, a career in rodeo is often short lived. "I am 28 now and you usually make it through your mid-thirties," said Broome, "so I have a few good years left and I hope to make the best of them."

District Forester Bennie Brant, Broome's immediate supervisor, said the young forester's intensive involvement in rodeo "has not in any way diminished his effectiveness as a

good, dedicated forester." He described him as a person "overflowing with energy" and one who "doesn't know the meaning of time." Brant said Broome is always willing and eager to "go out and work with a landowner at any hour."

The district forester said "It's nothing for him to drive 2,000 miles or more on a weekend and then come back here on Monday morning full of life and raring to go." He said Broome relates well with landowners and is very good at presenting programs at schools and civic clubs.

Broome will probably appear before cheering crowds at two or three rodeos again this weekend, but when Monday comes he will trade his flashy cowboy regalia for the somber green uniform of the Commission and spend another week in the less glamorous but satisfying work of being a forester.

FIRST CANDLELIGHT PERFORMANCE GIVEN

After a half century of hosting statewide annual pageants for Miss Georgia Forestry, the Commission held its first candlelight pageant at Newton County's Fairview Elementary School.

The pageant, coordinated by the Commission's Newton-Rockdale Unit and the Newton County Extension Service, was two minutes away from starting when lightning struck and knocked out all lights. The auditorium, which has no windows, was blinked into darkness.

Newton-Rockdale Ranger Beryl Budd made his way to a telephone as cigarette lighters flickered on in the darkness. Budd found the phones out of order, so he sent a member of the audience to drive to the local power company and urge priority for the Fairview area because of the pageant.

Meanwhile, Budd told the audience that lighting should be restored shortly and the pageant would begin. Fourteen contestants and an audience of more than 150 had already braved severe weather warnings - including the threat of tornadoes - to attend. To make matters worse, the air conditioners were also out.

An hour passed. Still no lights. The crowd began to mill around restlessly as the contestants backstage grew impatient. With severe weather warnings still in effect for the area, a less imaginative ranger might have called the whole thing off and sent everybody home.

However, Budd rallied to the occasion by gathering enough candles to line the front of the stage. He then informed the audience that the pageant would be held by candlelight.

Floodlights arrived in time for the evening gown portion of the program. After much consideration, Jenna Lynn Moore was selected Miss Newton-Rockdale at 10:25 p.m. Five minutes later, as final photos were being made, the lights came back on.

The Commission is reminding Georgia communities that June 15, 1991 is the deadline for grant applications for the America The Beautiful program. More than 200 information packages have been mailed to interested applicants throughout the state and others wanting the material explaining the federally-funded beautification program should contact Sharon Dolliver or Barbara Wood at 912/744-0245 or 912/744-0242.





Amy Fowler
Worth County



Nicole Mosteller
Butts County



Jennifer L. Hartley
Taylor County



Tanya Mabry
Dawson County



Alysha Strickland
Brantley County



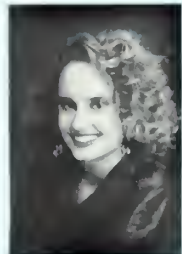
Jill Bohannon
Screven County



Brandi Johnson
Emanuel County



Miranda Redding
Macon County



Nicole Fields
Lumpkin County



Catherine Bleich
Coweta County



Charlene Mason
Madison County



Stacy Durven
Cook County



Carla Patten
Charlton County



Amy Swanson
Ben Hill/Irwin



Kathryn Ash
Oglethorpe Co.



Jody Biggers
Clark/Oconee



Stephanie Grogan
Henry County



Cina Cothem
Ware County



Mysti Todd
Pierce County



Stephanie Kausman
Washington County

Miss Georgia Forestry

These young ladies and several other winners in county pageants will be on Jekyll Island June 16-18 to compete for the Miss Georgia Forestry crown. It will be the 51st year the statewide contest has been held to select a girl to represent forestry in parades, festivals and other promotions.



Melanie Powell
Wheeler County



Christi Cutchens
Decatur County



Carolyn Davidson
Morgan/Walton



Deidre Williams
Toombs County



Sylvia Braddy
Montgomery County



Beth Richards
Green County



Joni Dwozan
Dodge County



Jenny Chambliss
Early County



Misty Flanders
Johnson County



Tanisha Wealot
Crawford County



Sheri Johnson
Miller County



Stephanie Russ
Atkinson County



Pam York
Tift County



Wendy Boatright
Bacon County



Fonda Rentz
Wayne County



Jenna Lynn Moore
Newton/Rockdale



Alison Peebles
Richmond County



Molly Daugharty
Clinch County



Left to right, Doniela Delk, Sharon Phillips, Bobbie Nevels, Kay Burch and Jan McLeod.

Photo courtesy of John Richards, Albany Herald

MITCHELL COUNTY LADY VOLUNTEERS PROVE THEIR FIREFIGHTING CAPABILITIES

City Clerk Jan McLeod received the call by phone and dashed across the street to set off the siren at the firehouse. The wailing sound alerted the countryside around little Sale City and summoned four other lady firefighters to join McLeod in response to the fire.

The four - Doniela Delk, Bobbie Nevels, Sharon Phillips and Kay Burch - are housewives who quickly dropped household chores to follow the town's fire truck in their cars to a woods fire that has spread into a hay field. The city clerk was in the fire engine with Robert Spicer, who was at the wheel of the speeding vehicle.

The ladies and the driver, all trained in battling fire, quickly extinguished the blaze and returned to the firehouse, straightened their equipment in readiness for the next call and drove back to their homes. The wives responded to the afternoon call while their husbands, who are also members of the department, were away at work.

The Sale City department is part of the Rural Fire Defense program - a program that provides fire protection for towns and farm communities in 145 counties. It is supported by the Georgia Forestry Commission. The Commission provides a "Fire

Knocker" (tank truck) and mobile radios for the Sale City volunteers.

Although there are 53 men and women volunteers in the department, one of the ladies said "this was the first time it was an all-girl effort, with the exception of the driver." McLeod, whose husband works in timber, said "I kept hopping on the way to the fire

The women of the community remember the frustration of standing by helplessly in the front yard and watching a fine old country home - a county landmark - burn to the ground, but now that they are trained firefighters, and know how to spring into action when the fire siren sounds.

that we all could remember everything we had learned in training." They evidently remembered; the Commission's Camilla District Office reported that it was a very professional operation that probably saved some valuable property.

Nevels, whose husband was at work at a brewery in Albany on that afternoon, said she was "not exactly afraid but I guess I was a little excited" when they made the run. Phillips, wife of a long distance truck driver and mother of four, said she was "glad we had the training to do the job," and Burch whose husband is employed as a bricklayer, said "we are eager to go anywhere we are needed" and echoed the sentiment of the others in saying she is glad she can answer the call when her husband is unavailable.

The women remember when the big Jack West home, a magnificent 80-year-old landmark in the county, went up in flames three years ago. "Many of us stood in the yard that day and watched it burn...and there is nothing worse than just being absolutely helpless at a time like that," said McLeod. She is pleased that training since that time has turned many spectators into efficient firefighters.

Building the fire department in the little Mitchell County town that lies just east of the Colquitt County line presented a challenge that was met by community cooperation. "We have had bake sales, fish fries, chicken dinner, street dances, car washes, you name it, to raise money," said Phillips. "We have paid for the building, installed a restroom and kitchen and now we're working toward a second fire truck."

An annual festival is held in October and the townspeople and residents in the outlying farm districts gather for a parade, crafts show and other activities. The women volunteers point out that creating the fire protection department has also brought the people together socially. "We have an annual Easter Egg Hunt for the children and last time we hid 649 eggs," Burch said. "At Christmastime, we have a community party and Santa hands out bags of fruit to all the children."

When the siren sounds in the middle of the day and the men are at work, it is now well known throughout the area that the women of the Sale City Volunteer Fire Department are willing and able to spring into action and answer the call to duty.



Left to right, Kirby Beam, Janet Gueny, Herb Gueny, Lynda Beam and Director Mixon.

FARM IN SCREVEN COUNTY IS FIRST TO ACHIEVE STEWARDSHIP STATUS

General William T. Sherman and a large column of the Union Army came down the dirt road in front of the plantation house 127 years ago; history touched the Screven County farm last month when it was designated Georgia's first Stewardship Forest.

The federal troops were on their way to the nearby hamlet of Oliver, where Sherman remained two days to coordinate the final thrust in his march to Savannah. They had passed through forests and fields along the Ogeechee River that are known today as the Toohollie Farm. The approximately 1,000 acres are owned and efficiently managed by Lynda and Kirby Beam and Herb Guerry, conservation-minded individuals who

earned the privilege of becoming the state's "Stewardship Forest, Number One."

In presenting the plaque and the official sign to the landowners during a ceremony at a summer house on the farm, John Mixon, director of the Georgia Forestry Commission, said it is hoped many farms across the state will eventually display the sign by following the lead set forth by the Beams and Guerry.

The landowners met several stringent qualifications to participate in the program and then agreed to follow a detailed management plan presented by the Commission, the USDA Soil Conservation Service and the Game and Fish Division of the Georgia Department of Natural Resources.

The Forest Stewardship Program was inaugurated last year after the National Association of State Foresters suggested that the various state forestry agencies aggressively promote multiple-use, or stewardship forestry in the programs of assistance to private landowners. The NASF convinced the U. S. Forest Service of the need for the promotion and it became a national program, with the involvement of several other agencies and organizations in

resource management and environmental protection.

The program in Georgia is directed to private landowners who own 50 acres of land or more, of which at least ten must be wooded. The participant must sign a Forest Steward's Creed which outlines a commitment to several principals. The landowner is asked to indicate a primary and second management object from a list including timber, wildlife, soil and water conservation, recreation and aesthetics.

When the program was launched by a proclamation from the governor's office last spring, Walker Rivers, a staff forester in the Commission's Management Department, was named state coordinator for the project. He said at the time those who qualify for the program will have "membership in an exclusive group of landowners who are the state's top woodland managers."

Groundwork in qualifying the farm in Screven County and arranging the ceremony to honor the initial participants was directed by Forester Dennis Pope, Stewardship Coordinator for the Commission's Statesboro District.



Lynda Beam accepts plaque and sign on behalf of the farm and responds to address by Director Mixon.



This will be a familiar sign on Georgia farms if enough landowners meet some rigid requirements.



Jordan in his woods



...in his law office

TALBOT LANDOWNER AND ATTORNEY NAMED TREE FARMER OF THE YEAR

Thrifty eighth grader Frank Jordan, Jr. had saved birthday gift cash and stashed away other monies that had come his way when his father suddenly decided it was about time his son made his first serious financial investment.

Under the elder Jordan's prudent guidance, the student bought 100 acres of cottonland and has vivid memory of the bitterly cold day when he rode a mechanical tree planter and his father drove the tractor to set out pine seedlings on about 40 acres of that land.

Jordan, who established a law practice in his home town of Talbotton after graduation from the Walter F. George School of Law, Mercer University, was destined, however, to become heavily involved in forestry even if he had not had that childhood

experience. He now manages more than 4,300 acres of pine and hardwood forestland in portions of Talbot, Marion and Harris Counties.

Jordan is quick to point out that he is not the sole owner of all the acreage. Some of the property belongs to his

Growing pine and peaches and practicing law...busy Talbotton native will have to take time off to accept award at GFA convention

parents, his brother and a sister; the family also owns orchards comprise of 17,000 peach trees. Other forest tracts are owned by individuals who retain the attorney to oversee the land and in many instances handle taxation and other legal matters.

Professional foresters have often praised Jordan for his expert management of his forest resources and those entrusted to him. His dedication to multi-use forestry and his environmental concerns recently earned him the title of Georgia's Tree Farmer of the Year.

Jordan is the first recipient of the state honor to be extensively involved in both pine and peaches. His father, now in his eighties, continues to manage the expansive orchards through border U. S. Highway 80 just west of Talbotton and Jordan lends a hand in the long established family enterprise especially during the busy harvesting and marketing season.

ADVANTAGES CITED

He said the forest-orchard combination has its advantages; the labor force that fertilizes and prunes the fruit trees picks the peaches and attend to other details in the orchards is shifted to the forests during the off season. Just prior to the current peach season, the workers trimmed the lower branches of pines in several large stands to accommodate mechanical straw rakes.

"We're just getting into pine straw," explained Jordan. "We had a contract to rake 77 acres and the yield was 7,600 bales." He said the pruned pine will make it easier for the rakes to operate in the pine plantations and also result in a cleaner straw. Jordan, however, is not unlike many other knowledgeable forest landowners who are striving to determine whether or not it is detrimental to tree growth to take straw from the forest floor. "We're strictly in the experimental stage," he said, and told of conferring with a contractor who adheres to a rotation plan and has proposed fertilization as a means of replacing nutrient loss due to straw removal.

Jordan estimates 100 bales of straw per acre could be collected and the revenue from that source, in addition to funds received from hunting clubs now leasing some of the tracts, would be a welcome supplement to the expense of maintaining the forest during its long years of growth toward

(continued on page 2)



Bill McLucas, Commission ranger for Clayton and Fayette Counties, instructs a group of Clayton 4th and 5th graders on planting techniques. The field trip was part of the Commission's co-sponsoring activities in McDonald's "Let's Get Growing America" national program.

ENTERPRISES AND COMMISSION SPONSOR MASSIVE YOUTH TREE PLANTING PROGRAM

The Georgia Forestry Commission reached more than 30,000 students in 44 schools within the state as an area co-sponsor of McDonald's "Let's Get Growing America" national program promoting environmental education and tree planting.

Other regional sponsors of the national program included Georgia McDonald's restaurant owners, Pike nurseries, and Atlanta television's WXIA-112 Alive. The area covered in the Georgia program extended from Jackson north - with high concentration in Atlanta and surrounding areas.

Larry Morris, Commission district forester for the Atlanta area, said 4th and 5th grade students were designated for the program. Morris said the rangers and foresters from the various counties conducted classroom environmental sessions before passing out the loblolly pine seedling to each student. The seedlings were contained in McDonald's promotional cups bearing the names of program sponsors. Over two days, McDonald's gave away these cups containing seedlings and encouraged selection of a good site for planting. Morris added that several designated planted areas were available, so some students took short field

trips with Commission personnel and planted the trees. The program resulted in more than 8,000 trees being planted in the Atlanta area, and more than 30,000 planted Statewide.

Morris said the Commission became a part of the national environmental effort when John Fletcher & Associates, a Decatur public relations firm representing McDonald's, requested Commission participation as a co-sponsor.

Emily Fletcher, an account executive with the firm, said, "We wanted to spin off the national program and make it as meaningful and educational as possible for Georgia and the Atlanta area. That's why we came up with the idea to approach the Georgia Forestry Commission and the other organizations as co-sponsors."

Morris and Fletcher, who worked together coordinating the project, agreed that the effort was "highly successful." Morris said the educational portion was a well rounded approach that emphasized the harvest of trees is necessary for making products - but that this harvesting and use must be balanced by replanting - reforestation.

"I believe this generation of children is the most environmentally aware of any

in history," Morris said. "They are extremely concerned over decimation of rain forests and the effects of global warming."

"And," Fletcher added, "they are becoming more aware and concerned about the ecological role of trees. This type of concern could be the sort of thing that just might save our planet."

Morris said the Commission intends to continue its efforts to assist McDonald's with similar programs for the future. McDonald's goal for the "Let's Get America Growing" program is to assist Global ReLeaf in planting 100 million trees around American homes, schools, parks, and offices by 1992.



As the Commission's role in environmental awareness and tree planting programs expand, an increasing number of companies are joining forces in efforts to solve environmental programs.

Levi Strauss and Rich's have completed a project in Atlanta that resulted in the planting of 10,000 pines on a 10-acre metro Atlanta tract near I-75. Levi Strauss approached the Commission with the promotional concept of planting one tree in the Atlanta metro area for every pair of jeans sold by Rich's in Atlanta.

Larry Morris, Commission district forester for the Atlanta area, said Turner Broadcasting Company had previously contacted the Commission concerning feasibility of planting trees on a 10-acre tract near its headquarters.

"As luck would have it," Morris said, "these two situations came along at the right time and were combined. The result was 10,000 trees planted on the Turner tract - which was a big boost for environmental awareness and another step toward clean urban air."

Morris said the Commission remains receptive to working with any organizations presenting feasible programs for environmental awareness and improvement.

STEWARDSHIP MODEL UNDER CONSTRUCTION

A 600-acre land stewardship model, the only one of its kind in the Southeast, is under construction at the University of Georgia Experiment Station in Griffin.

The Georgia Forestry Commission and other state and federal agencies are building the model as part of the Georgia Stewardship Program. The site will be a living example of modern land use practices.

"We're going to use all the modern techniques," said George Granade, a spokesman for the Experiment Station. "It will involve not only forest management but soil conservation and wildlife management."

The forest will include examples of hardwood, pine and mixed tree management on large tracts. The program will also feature such diverse practices as woodland grazing for cattle and examples of forest recreation use.

Soil conservation and erosion control will be major aspects of the stewardship plan. The U. S. Soil Conservation Service is renovating badly eroded gullies on the site with different types of grasses. As a soil conservation measure, the Forestry Commission is redesigning some roads in the tract and building others.

The stewardship model will be open to groups and individuals through the Georgia Forestry Commission, the Georgia Experiment Station and the other supporting agencies.

Every two years the model is the site of the Land Use and Forest Management Field Day. The event is scheduled for Sept. 25 and sponsors expect 2,000 people to attend.

---Ted Smith
Ga. Agricultural
Experiment Stations



Large outdoor audience of South Georgia landowners hear speakers as field day activities begin on farm in Emanuel County.

SOUTH GEORGIA FIELD DAY HELD EVENT SCHEDULED IN NORTH AREA

Hundreds of South Georgia landowners in early May attended the Land Use and Forest Management Field Day on a 2,500 acre farm near Swainsboro to view demonstrations and hear resource professionals explain modern methods of enhancing forests, soils, water and wildlife.

A similar event will be held September 25 near Griffin for landowners in that section of the state. The Griffin field day at the University of Georgia Experiment Station northwest of the Spaulding County city will be the third time the event has been held there.

Forester Robert Farris of the Commission's Newnan District, coordinator for the field day, said the 1991 version of the Land Use and Forest Management Field Day is being expanded and is expected to draw an even greater attendance than did the previous two field days. Farris said demonstrations will be provided and expert advice will be given on the following subjects:

Pine and hardwood management, pond management, home sites and backyard habitat, forest road construction, recreation, gully control, endangered species, taxes and estate planning, utilization, wildlife manage-

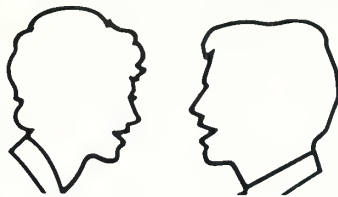
ment, prescribed burning, stand regeneration, water quality management, weed control, thinning practices, pine straw management, marketing timber, recycling and forest stewardship.

The forester said persons wanting additional information on the field day should call toll free 1-800-GA TREES.

Forester Chip Bates of the Commission's Statesboro District, coordinator for the recent field day in that area, rated the event "highly successful" and said plans are already underway for the field day to be held again on the Emanuel County farm in 1993.



PEOPLE



IN THE NEWS

ENE ROGERS, management forester in the Statesboro District since 1970, retired April 30 to end a 32-year career with the Commission. Fellow employees, other friends and family members honored him with a dinner party



ROGERS



McMURRY

May 11. Rogers, who graduated from the University of Georgia and served two years in the armed forces, began his career as ranger in Houston County and later served as forester in Sumter and Jenkins Counties. The forester and his wife Meredith have five children and three grandchildren. The couple attends the United Methodist church...BOB M. McMURRY, management forester in the Gainesville District, was honored at a retirement dinner in Lavonia April 25. A native of Franklin County and a graduate of the University of Georgia, McMurry came with the Commission in 1958 and served in Franklin and surrounding counties during his long career. The forester and his wife Maxine have a married



KELLY



McDONALD

daughter, Nancy, and a son, Russell, a student at Georgia Southern University. McMurry is active in the Lions Club and the couple attend Lavonia United Methodist Church...Administrative Secretary CATHERINE KELLY, secretary for the Commission's Infor-

mation and Education Department, retired in April to end a 26-year career. A retirement dinner was held in Macon for Catherine by fellow employees and other friends, with her husband, George, and their four daughters, sons-in-law, and six grandchildren as special guests. The retired secretary, who is active in Stone Creek Baptist Church, said she intends to spend some of her retirement time gardening and traveling...RANGER BOB McDONALD of the Banks-Hall County Unit was honored at a retirement dinner in Gainesville last month for more than 33 years of service to the Commission. The ranger, a native of Norwood, came with the Commission as a patrolman in the McDuffie County Unit. He later served eight years as assistant ranger in DeKalb County and was named ranger of the Banks-Hall Unit in 1965. He is a member of an amateur radio club and the American Legion. McDonald and his wife, Barbara, make their home in Gainesville. He plans to operate a radio shop in that city...DR. JAMES T. PAUL, senior research forester and project leader of forest meteorology and the Eastern Fire Management Research Unit in Macon, has retired from the USDA Forest Service. A native of Gray, he worked in national forests in Georgia and Idaho before coming with the fire laboratory in 1965. DR. JAMES M. SAVELAND has been named acting project leader...HARRY R. POWERS, JR, chief plant pathologist, recently retired from his position as project leader of Diseases of Southern Pine Plantations and Seed Orchards, a research work unit of the USDA Forest Service, Southeastern Forest Experiment Station. Powers is noted for many achievements. He contributed to early research on fusiform rust by developing an inexpensive and effective method of identifying high-risk areas...BRUCE L. JEWELL is the new Public Affairs Director for the Southern Region of the Forest Service. He replaces STANFORD M. ADAMS, who retired in May and will begin a second career as the head of the Division of

Forest Resources in the North Carolina Department of Environment, Health and Natural Resources.

Tree Farmer Of The Year

(continued from page 20)

merchantable timber.

Timber is presently being cut on a 525-acre tract, but an over abundance of spring showers has slowed the logging operations. Some 300 acres of timber were harvested last year and seedlings were planted during the past season on 140 acres. Logging roads and forest trails are properly maintained throughout the forests to prevent erosion and Jordan said he appreciates the cooperation he receives from the Forestry Commission in providing firebreaks and technical advice.

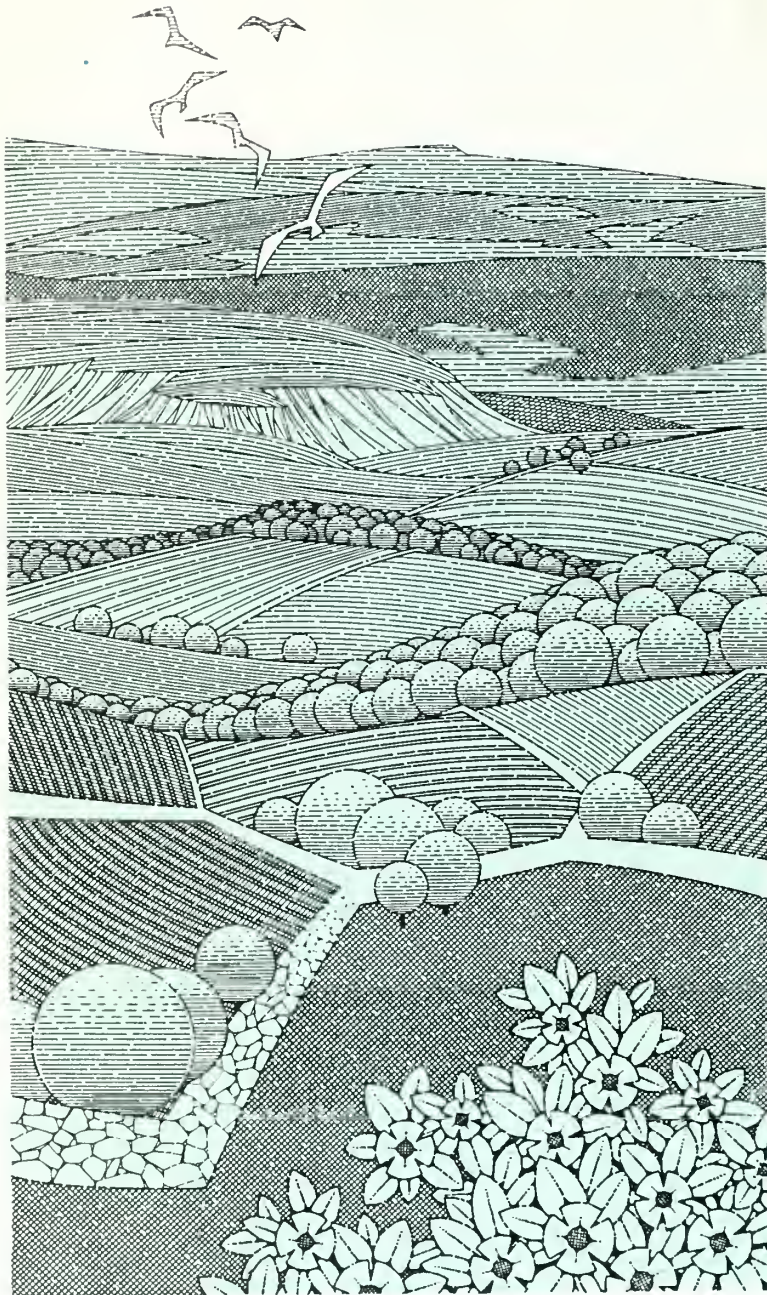
WILDLIFE MANAGEMENT

There is a generous scattering of well planned wildlife food plots on the property and Jordan said he is careful to solicit hunting clubs and other hunting interests that will not abuse the forests.

Firewood from the hardwood that flourishes in low-lying areas along the streams was another source of income in recent years. The landowner said wood is no longer being sold, but some is cut each year for the fireplaces of family members and some close friends.

Forester Steve Smith of the Commission's Americus District said he has enjoyed working with Jordan in timber thinning, chemical treatment of undesirable species and several other related projects. "Mr. Jordan is a very good steward of the land," Smith said. "He is a conscientious person who works hard to make sure the forest is well managed in every respect...he rightly deserves the Tree Farmer of the Year distinction."

The parcel of land his father helped him buy in his youth was sold years later along with its trees - and the money was used by Jordan to construct an attractive country home near Talbotton. When he comes forward to accept the state honor at the Georgia Forestry Association convention on Jekyll Island in June, he could conceivably think of that childhood lesson in forest economics and how it has helped shape his role as a true conservationist.



**TREES
SOIL
WATER
WILDLIFE**

These four valuable natural resources will be protected and greatly enhanced by Georgia landowners who qualify for the Stewardship Forest program. All Georgia Forestry Commission offices have details on this new, challenging program.



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MASSIVE FIELD DAY PLANNED FOR FARM AND FOREST OWNERS

They're doing it again in Griffin!

It's a repeat performance of a major event held for landowners in 1987 and 1989, but many new features have been added and the massive demonstration will be "bigger and better than ever" this time.

That's the claim of Robert Farris of the Georgia Forestry Commission, coordinator of the third Land Use and Forest Management Field Day scheduled for September 25. It will again be held on 650 acres of forests, fields and streams that comprise a scenic section of the Georgia Experiment Station.

The forester, who has been one of the key planners for the field day since it was first held in 1987, based his claim on several new and innovative demonstration areas that are being added this year and other activities that will benefit the more than 2,000 landowners expected to attend.

The event is a joint effort of the Forestry Commission and several other state and federal agencies and organizations to show landowners how modern management techniques can enhance forests, soils, streams and wildlife. The demonstrations will not only deal with environmental concerns, but many will illustrate how landowners can gain a greater profit from their resources.

24 DEMONSTRATIONS

A circuit of 24 demonstration stations will be set up on the grounds with from one to four speakers - each an expert in his or her own professional field - at each location. Landowners will be transported from one station to another by a tram system and a barbecue luncheon will be served.

He pointed out that topics to be

thoroughly discussed and demonstrated in a natural setting will range from artificial regeneration, duck pond management and marketing timber to pine straw management, thinning practices, taxes and estate planning and wildlife management.

Registration will begin at 8:00 a.m. at the field day site, followed by brief addresses of welcome and a short talk by a prominent speaker to be announced. The event will end at 4:00 p.m. and many valuable door prizes will be given throughout the day.

TOPIC STATIONS

Some of the topic stations and speakers are as follows: ARTIFICIAL REGENERATION - Jim Hawkes and Glen Johnson, Georgia Pacific. Two foresters with a major forest products company discuss and demonstrate site preparation, tree spacing, proper seedling planting techniques and other practices to help assure a good healthy stand of trees.

DUCK POND MANAGEMENT - Tom Hicks and Steve Johnston. The wildlife biologists with the Department of Natural Resources will show and tell how a pond for ducks can be constructed and how an established pond can be renovated and maintained for top efficiency as a habitat for fowl.

FOREST ROADS/BROAD BASE DRAINAGE DIPS - Ray Doss and Ben Jackson, School of Forest Resources, University of Georgia. Carelessly built logging roads can cause serious soil erosion and stream pollution. These instructors will demonstrate the correct way to build a road and drainage system to avoid any harm to the terrain.

ON THE COVER - Autumn returns to North Georgia. This rural scene in the mountains was captured by Photographer Benny Brewton.

HARDWOOD MANAGEMENT - Kim Coder, Extension Service, and Dan Sims, U. S. Forest Service. The instructors will tell how Georgia's hardwoods can be profitably managed. They will discuss hardwood management and marketing procedures.

GULLY CONTROL - Ken Gran, Soil Conservation Service. Grass seeding, grass waterways construction, sediment ponds. These are some of the topics to be discussed.

FOREST STEWARDSHIP - David Hoge and Walker Rivers, Forestry Commission, and Karen Johansen, DNR. Forest Stewardship in Action is the theme for the field day and this trio will tell how landowners can become involved in a new movement that is sweeping across the state.

HOMESITES, WILD FLOWERS & BACKYARD HABITAT - Larry Morris, Forestry Commission, and Will Corley, Extension Service. This attractive station on the circuit will feature a small cabin surrounded by wild flowers, bird houses, tree islands and other landscaping innovations that are ideal for a wooded area.

HUNTING ENTERPRISES - Dan Crumpton, consultant forester, and Jeff Jackson, Extension Service. Many landowners are making a good profit by leasing their woodlands to hunting clubs. These two will tell the best way to set up a lease deal, or a "pay as you hunt" type of profit-making venture.

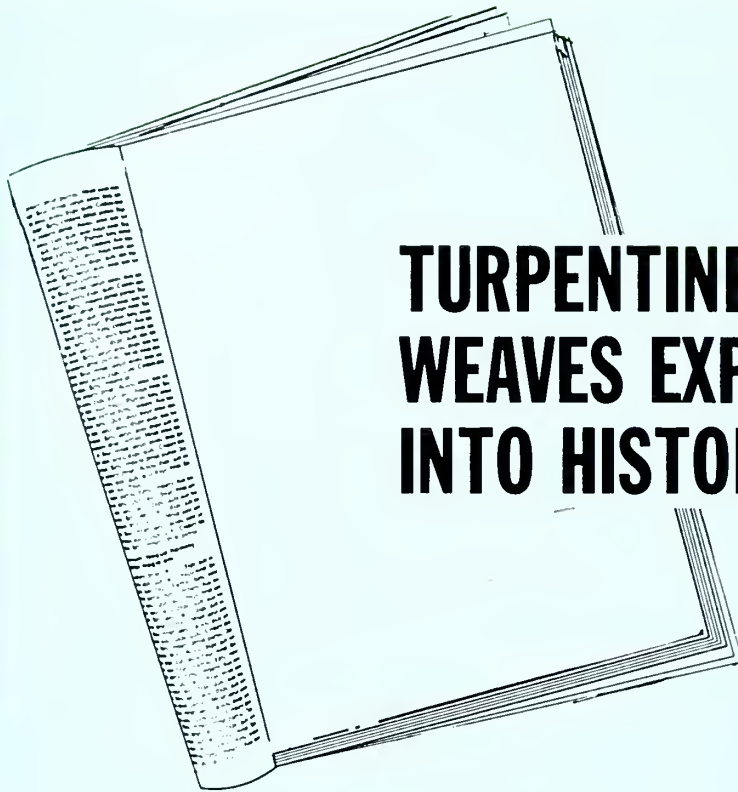
TREE PESTS - Terry Price, Forestry Commission, and Keith Douce, Extension Service. The most common and destructive insects and diseases that plague Georgia's forests will be identified and control measures will be discussed.

LAND MANAGEMENT, ESTATE PLANNING, TAXES - Larry Allen, Soil Conservation Service; Bruce Pierce, Forestry Commission; Mark Gibbs, C&S Bank forester; and Bill Gibson, Gibson and Conger Accounting. The new tax system will be thoroughly discussed and landowners will learn how best to deal with problems that arise. Sound advice on estate planning will

(continued on page 22)

Demonstration scenes at right are just three of the many stations that were featured in the 1989 Land Use and Forest Management Field Day at Griffin. An even greater number of demonstrations are being planned for the upcoming field day.





TURPENTINE FARMER WEAVES EXPERIENCE INTO HISTORICAL NOVEL

By Howard Bennett

James S. Willoughby always wanted to be a novelist but had to deal with a serious eye problem, the Great Depression, and the day-to-day business of making a living for his family before he finally achieved his goal at age 82.

The Georgia author's historical novel, "The 'Possum Hunter and the Tar Heels," was published three years ago and has the distinction of being the only work of fiction based on the South's turpentine industry. Willoughby writes from personal experience, coupled with considerable research, as he weaves an intriguing tale of the naval stores industry as it moved southward from North Carolina to thrive for many years in Georgia.

Willoughby, who grew up in rural Alabama in a family of eight children, was told by his English teachers in high school that he had a genuine talent for writing and they encouraged him to plan for college, but measles settled in his one good eye during his junior year and that and other misfortunes dashed his hopes of pursuing formal education beyond high school.

After high school graduation in 1925, however, Willoughby decided to continue his education through travel and observation, a pursuit that would broaden the knowledge of a would-be author. He set out to tour the country mainly by hitchhiking and stopping long enough along the way to take odd jobs to support himself. It was a rambling journey that lasted two years and after working on a ranch in

Wyoming, in a cannery in California and tackling a variety of other jobs, he returned home to operate a country store.

He grew restless after a couple of years as a merchant, took his store's profit of \$700 to buy a new Chevrolet and made a second swing through several Western states, this time enjoying better control over his destinations by having his own transportation. Although it was an enjoyable adventure, Willoughby soon realized that he was, in essence, chasing an elusive dream - the dream of becoming a successful writer - at a time when the country was in the depths of a depression and writers, as well as other professionals and non-professionals, were hard pressed to make a living.

Facing that harsh reality, he headed back to his native Southland.



Willoughby farmed and operated a turpentine still with a brother for several years, but sold his interest when the Depression continued to worsen in the thirties. He later began to gradually gain a foothold in forestry. His humble beginning as a tree farmer came when he dug a few pines from the wild and planted them along a fence row. "I was surprised they lived," he said. "I had always been told that you couldn't transplant a pine tree and expect it to survive."

After deflating that transplant myth, Willoughby



The writer and his wife look over scrapbook containing newspaper and magazine reviews of his book.

saw a great potential in planted pine and hastened to find a seedling supplier in an age when forest tree nurseries were virtually unknown. He eventually found a source and planted seven acres in pine, followed by a planting of 70 acres. He later planted 1,000 acres in pines, starting with the help of "a man and a mule," but completing the large planting by mechanical means.

The tree farmer owned 3,030 acres of timber at the peak of his career in forest management, turpentine production, land speculation and real estate, but he said he had to sell much of his land during periods of economic recessions. Today, his land consists of 1,000 acres in three Georgia Counties and in South Carolina.

Willoughby, who now lives in Thomaston, owned and operated a turpentine still near Cedar Springs for many years and much of the practical experience and technical knowledge he gained there is reflected in his novel.

"It's hard to say when I first started writing the book," the author said, "It was somewhere between 10 and 20 years ago. I would write when I could find a little spare time, which was always hard to come by." He said he did his writing on a rather ancient and stubborn typewriter, and "I have only two fingers that know the keyboard."

Willoughby believes his accumulated experiences in farming, forestry, naval stores, travel and his keen interest in people and places, as well as an ever present, nagging desire to write, compelled him to attempt the arduous task of composing 450 pages of fiction.

When the book was finally finished, the author's wife Doris and their sons, Donald, an engineer with Ford Motor Company in Detroit; John, a forester in LaGrange; Ralph, a geologist in Columbia, S. C.; their wives, and every grandchild who was old enough to

read and comprehend, reviewed the work and all insisted that the manuscript was too interesting and well crafted to gather dust at the Thomaston home. They agreed it should be published.

However, Willoughby said he soon learned the hard lesson that awaits most writers seeking a publisher: The publishing houses - especially the major houses - receive an avalanche of unsolicited manuscripts daily, but few are selected for publication and the sales promotion and wide distribution that follows.

After Willoughby had received his share of rejection slips from publishers, his son Donald came to the rescue. He formed Tall Timber Publishing Company and had a company in Michigan print 1,000 copies.

* * *

Although the author spent half his life in the naval stores industry, he said "I always wanted to be a writer, even since childhood, and I never intended to get into the turpentine business. It is something I just backed into and when it became a part of my life, it gave me an opportunity to write on a subject I knew a lot about." He also wrote a book of poems.

"Musings Among the Pines by a Georgia Tree Farmer," and he dedicated it to his wife on their 50th wedding anniversary, but he quipped: "Writing poetry is not my hobby, it's my affliction."

Willoughby never expected his book to make the national best seller list as compiled by the New York Times, but the novel does have considerable regional appeal and has received good reviews in several newspaper and magazines. Most of the original copies, both paperback and hard cover, have been sold but the writer is uncertain as to whether he will order a second printing, claiming rising costs of production and distribution might be prohibitive.

Manuals, brief histories and magazine articles have been written from time to time on the naval stores industry, but James S. Willoughby's "The 'Possum Hunters and the Tar Heels" stands alone as the book that reveals the full story as told both dramatically and factually through the voices of John Guilford, Nash Holden, Jack Parkins and several other colorful and unforgettable fictional characters.



The University of Georgia's Thompson Mills Forest in Jackson County has been designated the state arboretum by the Georgia General Assembly. The 318-acre forest was deeded to the university in 1980 by Lenox Thornton Thompson of Roswell to be used by the School of Forest Resources as a teaching and research facility.

Since 1980, the forest has served as a site for studies of trees and natural plant communities. The forest includes more than 100 indigenous species in addition to approximately 80 native trees grown from seeds collected within the state.

Claud Brown, UGA professor emeritus of forest resources, said that in the next few years the arboretum will include all native trees of the Southeastern United States. Brown, who has spent the past 10 years working to establish the arboretum, said inclusion of all Southeastern tree species would be a unique accomplishment for any arboretum in the region - and possibly the nation.

Brown, a native of Flowery Branch, Georgia, graduated from the University of Georgia in 1949 with a degree in forestry. His first job following graduation was with the Commission as a ranger for Screven County. He returned to UGA and earned his master's in botany in 1954. Brown graduated from Harvard with a PhD in biology in 1958.

From 1958 to 1960, Dr. Brown was in charge of the genetics program at Texas A&M University for the Texas Forest Service. He returned to UGA in 1960 as a professor in the School of Forest Resources.

Although now retired, Brown continues to work with development of the arboretum and has even managed to co-author a book titled *Trees of Georgia and Adjacent States* with L. Katherine Kirkman. The 292-page *6/Georgia Forestry/Fall, 1991*

book contains 432 identifying color photographs of trees.

However, the Thompson Mills Forest remains Brown's primary interest, as it has been for the past decade. He points out that the forest possesses great potential as an arboretum for a variety of reasons including diverse terrain. Numerous habitats include flood plains and swampy areas fringing the Mulberry River, fertile stream bottoms, numerous ravines with steep slopes and dry ridges, and an extensive granite outcrop that harbors threatened plant species.



Dr. Claud Brown, professor emeritus of the University of Georgia and arboretum promoter.

A preliminary study of wild flowers in the arboretum has identified more than 150 species ranging from Amphianthus (an endangered species) to Sundrops. Brown said a documented floristic survey of the forest has not been completed, but is expected to progress as the arboretum develops. He said that development of a quality arboretum is a slow and meticulous process that will serve many generations to come.

Several miles of foot trails already wind through the

“The objective of the Arboretum is to have all native trees of Georgia growing in one locale and provide a repository for endangered plant species so visitors can study, observe, and just enjoy nature.”

forest, offering over 150 species of native trees and shrubs identified with permanent, color-coded labels. Approximately 85 percent of Georgia's 213 native trees are now included in the arboretum, with more trees being planted each year. In addition, over 138 species of exotic conifers in 27 genera have been established with flowering trees representing 79 genera.

The pinetum now contains all native conifers of Georgia - and over 100 exotic taxa of gymnosperms from 27 different countries. A collection of this magnitude is considered invaluable to students of dendrology and to researchers in genetics, tissue culture, ecology, silviculture and conservation.

“With continued additions to this conifer collection, in time the Georgia state arboretum should have one of the most extensive collections of conifers in North America,” Brown said.

Brown gives much of the credit for the arboretum's successful development to his UGA colleague Dr. Harry Sommer, an associate professor of forest resources who has worked with Brown on the project since its inception.

“Dr. Sommer has been instrumental in obtaining seeds from all over the world for the arboretum,” Brown said. “He is internationally recognized for his research on tissue culture and cloning forest trees.”

Brown said that as the arboretum progresses, it will become an increasing supplement to the state botanical gardens in Athens. “The objective of the arboretum is to have all native trees of Georgia growing in one locale and provide a repository for endangered plant species - so visitors can study, observe, and just enjoy nature. This will supplement the botanical garden's primary orientation toward horticultural and other flowering plants.”

During the past 10 years, the Thompson Mills Forest has been used by an increasing number of dendrology

Assistant forest manager Bill Lott examines eight-year-old stand of maritime pine (*Pinus pinaster*). This species, indigenous to the Mediterranean basin, is the source of Pycnogenol - trade name for a recently developed antioxidant now sold in U. S. health food stores. This stand - the only one of its kind in the state - may be a role model for future Georgia generations, if health food market demand continues to increase.

Anyone touring the new state arboretum will encounter Bill Lott, who has served as tour guide and assistant forest resource manager for the past ten years. A virtual walking encyclopedia of forestry knowledge, Lott can rattle off a stream of species and genus facts at the drop of a pine cone.

However, Lott has no forestry degree or any formal training in forestry. It's not that he has anything against formal education - he has an associate of liberal studies degree from Gainesville College. In fact, he took “just about every course they offered.”

“I took courses until the president of the college told me I would have to go somewhere else, that there was nothing left for me to take,” Lott remembers.

In addition to exhausting academic offerings of Gainesville College, Lott also managed to take every “beef cattle short course” conducted by the University of Georgia for 14 years.

So how did Lott learn so much about forestry and evolve as keeper of the state arboretum? “Practical application,” he says. During a decade of cultivating and nurturing Thompson Mills Forest, Lott said he personally planted more than 5,000 trees - which include approximately 200 native species and 100 species of exotic conifers. Periodically he would refer to his book laden truck that includes texts on trees, weeds, birds and mushrooms.

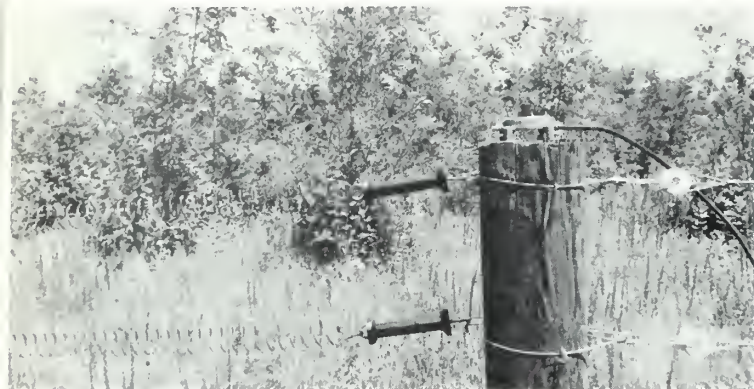
“I've always been interested in trees,” Lott said, “but most of my early learning came from school FFA programs.” Lott now serves annually as a judge in the FFA State Forestry Field Day Finals held at Commission headquarters in Macon. Also sought after for numerous speaking engagements, Lott says he could speak to some group every night, if he wants to.

Lott says some people regard the Thompson Mills Forest as “the best kept secret in the state” during its ten year cultivation period. But this lack of limelight did not prevent considerable attention. Visitors have ranged from local school groups to the Secretary General of Mainland China; and Lott has attracted interviews from such contrasting publication as the Jackson Herald and Wall Street Journal.



students, 4-H Club groups, Boy Scouts, civic groups, foresters, etc. Currently, the arboretum is open to individuals and small groups only by appointment because complete visitor facilities are not yet completed.

The arboretum is now open on week days and closed on weekends. Individuals and groups interested in visiting the arboretum may contact William Lott (404-654-2666) to schedule a tour. Additional information on the arboretum may be obtained by calling the University of Georgia School of Forest Resources (404-542-2686).



Federal Energy Commission biomass research site in Thompson Mills Forest is protected by electric fence that discourages deer from feeding on black locust trees. Middle photo: All species of pine native to Georgia grow on this impressive tract. A similar tract supports all species of native oak. Bottom Photo: Leaf of Big Leaf Magnolia species has leaf removed for study.

STATE TREE OF GEORGIA ADDED TO NATIONAL GROVE

The live oak - Georgia's State Tree - and trees representing nine other states were planted in Washington, D. C. during a ceremony this summer which officially established the National Grove of Trees, a gift from the state foresters from across the United States.

The grove was dedicated on April 25, 1990, and the design for the grounds was approved last January, but the initial planting in June was a beginning that will ultimately include trees from all states and the District of Columbia. Each will receive a symbolic deed for an area of 10,000 feet for the planting of a state tree, with future plans calling for the planting of understory native plants, including wildflowers.

John Mixon, director of the Georgia Forestry Commission and president of the National Association of State Foresters, and Dale Robertson, Chief of the U. S. Forest Service, were among those officiating in the planting ceremony. Mixon said "it is fitting that the states are united in a project that will give visitors to our national capital an opportunity to visit a unique forest, a grove that will be both educational and inspirational. It will be an opportunity for a person to tour a 30-acre site and see all the important trees of the entire nation."

Robertson said the grove "is a monument to America's forest resources and a place where visitors from every state will be able to find a little piece of home." The Forest Service Chief said the grove is not just a living museum, but also an important resource for the arboretum's continuing research programs.

Visitors to the grove, which was designed by a firm in Alexandria, VA., will follow a set of markers and a connecting trail to experience the beauty, harmony and the variety of state trees when the project is completed within the next two years.

Other states included in the initial planting were Arkansas (short leaf pine), Delaware (American holly), Illinois (white oak), Iowa (bur oak), Maryland (white oak), Nebraska (cottonwood), South Dakota (Black Hills spruce), Texas (pecan), and Virginia (flowering dogwood).

Other organizations participating in the establishment of the grove included the American Forest Council, the USDA Agricultural Research Service, and the U. S. National Arboretum.





The Commission's District 7, with headquarters in Americus, was presented the Outstanding Forestry District Award at the annual convention of the Georgia Forestry Association.

The district was praised for its balanced activities that promote good forestry practices and provide excellent protection of the forestlands. The selection committee said the district has the cleanest and best maintained equipment, buildings and grounds in the state.

Dawson County won the Outstanding Forestry Unit Award in Region 1 and the Macon-Schley Unit took honors for the best in Region II.

The Dawson Unit, along with the Dawson Forest, captured the award because of the pride and skills of its personnel as reflected in the well maintained equipment and buildings. The ranger and patrolmen were especially commended for constructing the unit office from pine that has been planted, harvested and manufactured into lumber by GFC personnel.

The Macon-Schley Unit's award was based on its unique programs for schools, civic clubs and other groups that effectively promote good forestry in the two counties. An essay contest is conducted in the public schools and Project Learning Tree is a popular project. In fire protection, the unit maintains one of the best records in the state.



Top left: Bob Izlar, executive director of the Georgia Forestry Association, presents Outstanding County Unit Awards to Ranger James Conner, left, Macon-Schley Counties, and Ranger Jerry Barron, Dawson County. In the photo above, Larry Walker, technical manager of Procter and Gamble Cellulose Company, Oglethorpe, displays the Wise Owl Award just minutes after receiving the coveted award at the convention. Below, Izlar presents the Outstanding Forestry District Award to District Forester Rowe Wall of the Commission Americus District.



89TH ANNIVERSARY CONVENTION

COMMISSION'S FIRST URBAN FORESTER RETIRES

The first retirement of an urban forester by the Commission marks an increasing national interest in a field that is still in its infancy, according to retiring Atlanta urban forester, Louie Deaton.

A native of Atlanta, Deaton came with the Commission in 1958. As one of the first urban foresters in the Southern United States, Deaton began his urban duties in the early 1960s. The Atlanta area's rapid growth created environmental challenges that prompted the nation's first full urban forestry program to be established under the direction of John Mixon, now state director of the Commission.

Despite advancement of urban forestry programs through the years (every state now has a program of some sort), Deaton still regards the field to be in its infancy, with many demands yet to be fulfilled. He plans to work on his own after retirement to encourage universities to establish urban forestry majors within their forestry curriculums.

Deaton recalls that one major factor in accelerating the development of Georgia's forestry program was the 1962 pine beetle epidemic. Attempting to control the beetle spread, Deaton and other foresters visited urban homeowners and suggested they cut down infested trees.

"While we were doing that, we wound up giving advice on their shade trees too," Deaton said. The shade tree concerns continued to mount and the definite need for an urban forestry unit was established.

Deaton was designated a metro forester in 1965; by 1967 the metro program had officially become the Urban Forestry Program coordinated by John Mixon.

Commission Director Mixon remembers Deaton during the early years of urban forestry as a dedicated forester who never knew when it was time to go home. "He'd gladly work past quitting time to help homeowners with shade tree cases," Mixon recalls.

DRY KILN SEMINAR SET FOR OCTOBER

The Southern Yellow Pine High-Temperature Dry Kiln Seminar, sponsored annually by the University of Georgia Extension Service, is scheduled for October 8-9 this year in the Research Auditorium at the Georgia Forestry Center in Macon.

The seminar provides: basic information about how wood dries; how to operate lumber dry kilns; and up-to-date information on techniques and procedures for improving quality of pine lumber dried at high temperatures. The seminar is designed for kiln operators, new and experienced. However, much information useful to mill managers responsible for dry kilns, 10/Georgia Forestry/Fall, 1991

such as drying costs, equipment needs and quality control, is presented.

The seminar will begin at 9 a.m. on October 8, and will end with a mill tour in the afternoon of October 9. The cost will be \$85 for the first registrant from a particular mill, and \$70 for each additional registrant from the mill. The registration fee will include the costs of two lunches, morning and afternoon breaks, the plant tour and the book *Drying Southern Pine Lumber*, published by the Southeastern Lumber Manufacturers Association.

OCONEE FOREST GAINS 815 ACRE RIVER TRACT

An 815-acre tract of forest land along the Ocmulgee River between Jackson

Deaton's dedicated work through the years resulted in a long list of awards. After working hours he frequently spoke to civic organizations and other groups. Deaton was recently recognized at the 1990 Georgia Urban Council as Outstanding Educator of 1990.

Numerous awards came from his activities with garden clubs, schools, soil and water conservation, contractors urban homeowners, nurserymen, and scouting. One of Deaton's most prized responses to his efforts is a 1982 personal letter from President Ronald Reagan congratulating

LOUIE DEATON



him on his scouting activities.

With environmental concerns increasing every day, Deaton sees a vital and expanding role for urban forestry in the future. Although retired from his formal duties with the Commission, he plans to remain active in urban forestry and environmental efforts.

Of his past efforts and numerous awards, Deaton says modestly, "I just had a knack for doing exhibits and talking to the public."

and Monticello in Jasper County will have been added to the Oconee National Forest.

The property was optioned for purchase in March from a private owner by The Trust for Public Land and held for conveyance to the U. S. Forest Service. A ceremony acknowledging the acquisition and deed transfer to the Forest Service was held in late July at the old Union Terminal Railroad Station in Macon. Senator Wyche Fowler and Congressman J. Roy Rowland participated in the brief program.

The forest land was purchased with \$1 million allocated from provisions introduced in the FY 1991 Senate Interior Appropriations Bill. The tract will be incorporated in the Oconee National Forest for management in the River Protection Program.

FORESTRY SCHOOL RENAMED WARNELL

The University of Georgia School of Forest Resources has been dedicated to and renamed for the late Daniel B. Warnell (1881-1945), a native of Southeast Georgia whose life reflects numerous forestry related successes during a difficult financial period that lacked today's technology.

The university's D. B. Warnell School of Forest Resources is named after a man who was not a scholar in the current traditional sense, yet he served on the Senate University of Georgia Committee. The essence of the legacy he left is a love for the land and a work ethic that benefits from wise use of available methods and resources.

Warnell's business affiliation with forestry began at age 15 when he became a woods rider and bookkeeper for the Kicklighter Naval Stores operation in Goveland. At 18, he and his brother purchased and began operating a turpentine still in Bulloch County. At 24, he purchased his brother's interest in the business and began expanding. Through the years, Warnell acquired numerous naval stores assets throughout Southeast Georgia.

Warnell was elected in 1931 to the Georgia House of Representatives and served in this position until 1937. He served in the Georgia Senate from 1937 through 1939. While serving in the Georgia Legislature, he worked to promote forestry, agriculture, game and fish, transportation, banking, and education (including the University of Georgia). Among his most concentrated legislative interests were efforts or statewide forest fire protection.



Mary Ida Phillips, widow of L. L. "Pete" Phillips, stands with Dr. Leon Hargreaves, Jr., retired dean of the School of Forest Resources, in front of the new facility named in honor of her late husband.

NEW FOREST SCHOOL BUILDING MEMORIAL TO "PETE" PHILLIPS

Generations of forestry students and researchers will have access to the L.L. "Pete" Phillips Wood Utilization and Plant Sciences Building on the campus of the University of Georgia, but few will ever realize the outstanding contributions made to forestry by the person for whom the new facility is named.

Phillips, a 1949 graduate of the School of Forest Resources at the University of Georgia and a member of the House of Representatives for 20

years, died in 1987, leaving legislative accomplishments that continue to benefit the forestry community and environmental interests around the state.

Following recent ceremonies dedicating the new building at the forestry school's Whitehall Forest, Director John W. Mixon of the Georgia Forestry Commission described Phillips as "a loyal friend of forestry, a skilled legislator who was dedicated to helping make and keep Georgia one of the most advanced forestry states in the nation." The director said "the fact that Pete was a graduate forester and a forest landowner himself gave him an insight into the vast economic potential forests hold for our state."

The state representative, who was Chairman of the Natural Resources Committee for many years and also served on the Ways and Means Committee, Appropriations Committee, Education Committee, was a native of Treutlen County. After

(continued on pg. 18)

At left, Carolyn Warnell Bryan, daughter of Daniel B. Warnell, unveils plaque designating new name of school.

Georgia Forestry/Fall, 1991/11



To become an outstanding forestry unit just didn't happen by chance. The Macon/Schley Forestry Unit obtained this status as a result of hard work and dedication on the part of Senior Forest Ranger James Conner and the other personnel in the unit. It is always a pleasure to see a unit progress and develop a well-rounded forestry program for the forest landowners.

- Americus District Forester Rowe Wall

James R. Conner was a ten-year-old Toombs County farm boy when he had a frightening experience that taught him the dangers that lurk in forest fires - even deliberately set and carefully controlled forest fires.

Conner, ranger of the Commission's Macon-Schley County Forestry Unit since 1984, said his father and their neighbors worked together in the late 1950's to burn off forested tracts and after one particular burn, when it was assumed the fire was "dead out," he was walking with another boy through the woods when his companion suddenly stepped into a burning stump hole and couldn't get his leg out.

Conner called to his father, who was walking ahead of them, and the seriously burned boy was rescued from the trap. Although he didn't lose his leg, as they had feared for a while, he was handicapped for life.

High Achievement

The vivid memory of that accident has stayed with Conner and now he never fails to stress safety to his patrolmen when they go out on a fire or engage in any other hazardous duty. A good safety record, however, is not the only achievement that had given the unit a high performance rating. The personnel, which includes three patrolmen and two tower operators, protects the 350,000 acres of forests in the two counties by holding the average wildfire to less than 2.5 acres, about half that of the statewide average. The unit averages selling approximately 1.5 million seedlings annually and has encouraged and assisted landowners in placing 14,000 acres under the Conservation Reserve Program since it began five years ago.

The unit is known for its close cooperation with county com-

missioners, city officials, other state and county agencies, and the pulp and paper industry. There is also a good relationship with forest landowners throughout Macon and Schley Counties.

Ranger Conner, a graduate of Toombs Central High School in Lyons,

came with the Commission in 1979 as patrolman in the Montgomery, Treutlen, Wheeler County Unit. He transferred to Macon County as ranger five years later and was promoted to senior forest ranger in 1989.

The ranger is District 7 coordinator for Project Learning Tree and has

MACON-SCHLEY FORESTRY UNIT



helped train more than 300 teachers in PLT. He is also coordinator for Community Wildland Fire Defense Training. He has conducted a forestry essay contest for local fifth graders for the past three years and recently staged the unit's 36th annual Miss Macon County Forestry Pageant.

The ranger is married to the former Miss Brenda Kay Brooks of Glenwood, an insurance clerk at Flint River Community Hospital. They have two children, James, 13, and Chelsea, 8. The family attends Cedar Valley Baptist Church. Conner is a member of the Macon County Jaycees, Travelers Rest Lodge, Scottish Rite and Shrine in Macon.

Patrolman Curtis Journey

Macon County forest landowners appreciate the services they receive from Patrolman Curtis Journey, especially the protection against wildfires. They also respect him for his knowledge of soils, insects and other forestry and agricultural concerns.

Journey, who came with the Commission in 1981, attended Albany State College and while a student he was employed by the Great Basin Experiment Area in Provo, Utah. It was working experience to study plants and insects. He also worked for a time with the Soil Conservation Service in Oglethorpe and gained valuable knowledge concerning erosion control and other agricultural practices.

The patrolman said he enjoys his work and the involvement with landowners, volunteer firemen in the county's Rural Fire Defense departments and other citizens that call on him for assistance.

Journey, a native of Macon County, lives in Montezuma with his wife, Patrena, who is employed at Robins Air Force Base. They attend New Hope Baptist Church.

Patrolman Brent McCarty

Forest Patrolman Brent McCarty, a native of Americus, served four years in the U. S. Air Force and spent much of that time as a jet engine mechanic.

At left, Patrolman Brent McCarty confers with Ranger James Conner. In other photos, Patrolman Curtis Journey checks his tractor and Patrolman Wayne Griffin repairs his pickup truck.



Naturally, he has no trouble maintaining the less complicated engines that keep the firefighting equipment in top shape at the unit's Schley County headquarters in Ellaville.

McCarty, who came with the unit in 1988, said he chose a career with the Commission because he enjoys the outdoor work. He formerly worked for a construction company. As instructor in the Community Wildland Defense Training, he teaches fire behavior, fire tactics and other techniques to citizens of his county. He is district winner in Top Gun competition.

The patrolman, who attended Georgia Southwestern College, is a sportsman and amazed fellow wild turkey hunters recently when he bagged two gobblers with just one shot. When he is not hunting game during his off duty time, he often helps his wife, Kay, who operates a florist shop with her mother in Ellaville. He said he has learned a lot about flowers, but leaves the flower arranging business for weddings, funerals and other occasions to the women.

McCarty and his wife have one son, Daniel, 4. They attend Ellaville Baptist Church.

Patrolman Wayne Griffin

Patrolman Wayne Griffin came with the unit in 1986 and said he has "loved every minute of it," although firefight-

ing and other Commission duties presented a drastic change from working with his family on a 4,000 acre farming operation in Macon and Dooly Counties.

The large acreage included land both owned and leased by Griffin, his father and four brothers and at one time 2,000 acres of cotton was grown on the highly mechanized farm. The patrolman said it was a successful operation until the drought hit in 1977. He said his father died in 1979 and he and his brothers finally gave up large scale farming in 1983.

Today, Griffin maintains a small farm as a sideline, but said he has adjusted to working for the Commission and is glad he made the change.

The patrolman is a native of Tifton and a graduate of Unadilla High School. His wife Betsy owns and operates a florist shop in Montezuma and they have three daughters: Jennifer, Sally and Grace. Jennifer was named Miss Macon County Forestry in 1989. The family attends Cedar Valley Baptist Church.

Griffin considers hunting his favorite hobby, especially since he won a brand new Ford pickup truck from a deer processing company in 1984 for bagging the top Boone and Crockett deer in a statewide contest.

Towerman Ferman Land

Tower Operator Ferman Lane has been climbing the 135 steps of the



100-foot tower at the Macon County Unit for 31 years and he has looked down on many dramatic changes during those three decades of Commission progress.

He has seen a complete turnover in unit personnel and many advances in equipment, training and communications. Every building, including office, shop and truck shed, has been replaced with modern structures since he came with the Commission.

The tower operator doesn't recall any dramatic moments while standing guard over the county's forests, but he does remember being chased down from the tower by lightning bolts on several occasions.

Lane said he enjoys walking and gets in three miles each day by walking from his home to the unit tower. About once each year he takes off to North Georgia or Tennessee to pursue another hobby, mountain climbing.

Lane, a native of Marion County and a graduate of Montezuma High School, is a member of First Baptist Church in Montezuma.



Charles McMath manages the fire tower in Schley County and he has enjoyed that job for 28 years. On a clear day he can see for about 23 miles from the vantage point of the 85-foot tower and he said he never tires of the scenery.

McMath, who grew up on a Schley County farm and attended Oglethorpe High School, said most of his observation has been routine; he has not spotted any spectacular forest fires during his career and about the only excitement that comes his way is provided by the U. S. Air Force.

His tower is in the training corridor used by both Moody and Eglin Air Force Bases and when the swift fighter planes sweep across the sky at a low altitude, the steel structure trembles.

McMath said he is content to man the tower and work as guardian of the county's forests and declares that the job "certainly beats picking cotton," a back-breaking chore he had to endure while growing up on the farm.

The tower operator, who is unmarried, lives on a small farm near Ellaville and is a member of the local United Methodist Church.



Tower Operators Ferman Lane, top photo, and Charles McMath above, guard the forests of two counties. Ranger Conner said both are veteran employees who seldom take annual or sick leave.

TWO SHORT COURSES SCHEDULED AT UGA

A short course entitled *Wood Procurement Management* will be held at the University of Georgia Center for Continuing Education October 1-2.

The course will cover the principles of wood procurement, legal and business factors, analysis of wood supply information, environmental regulations, economic analysis of procurement and harvesting decisions, and computer software to support many of these activities.

The instructors are *Tom Harris* and *Fred Cabbage*. The course has been approved for 13 hours of Category 1 Continuing Forestry Education.

A short course, *Herbicides in Forestry: Assessing and Controlling Competition in Pine Stands*, will be held at Center for Continuing Education, October 14 - 16.

The course will examine the methods for assessing competition prior to treatment, prescriptions for controlling competition with chemicals, the responses to various treatments and non-timber issues related to the use of chemicals. A full-day field trip will demonstrate assessment pro-



The University of Georgia

Georgia Center for Continuing Education

cedures and illustrate the effects and appropriateness of various treatments.

The instructors will be from the forestry industry, universities, the U. S. Forest Service, private consultants and the chemical industry. The course has been approved for eight hours of Category 1 Continuing Forestry Education. It will also provide recertification training for commercial pesticide applicators.

For additional information on the short courses, contact Dr. Richard C. Field, Forestry Programs, Georgia Center for Continuing Education, The University of Georgia, Athens, GA 30602 or by phone (404) 542-3063.

OUR CHANGING FORESTS

By Kim Coder

The trees outside your door have changed over 12,000 years (and so has your door!). The forests of the South have undergone great changes in just a few generations of trees. The first European settlers and the first Native Americans to walk in Georgia and eastern North America saw forests different from today's forests.

In just the past 100 years, our forests have changed radically. In the mountains and valleys of eastern North America at least 50 percent of the forest was composed of chestnut trees.

The chestnuts are now gone (except for persistent sprouts in protected hollows). The oaks, hickories and maples have had a major competitor wiped out.

In the past 50 years, elms have been decimated. The forested sites once held by elms have now been taken over by other trees of the bottomlands.

The changes in the forests since settlement have been great. But few changes can match the forest species changes from the last glacial period to the present. Few of the trees of eastern North America still remain in the same range as where their ancestors grew.

The farthest extent of the last

Trees have no legs or way of moving except through widespread scattering of their off-spring.

glaciers came south to southern Ohio and Indiana. Earlier glaciers had covered areas much farther south. A hundred miles in front of the glacial ice sheets were areas of tundra with pockets of willow and cottonwood. Today these forests are found in far northern Canada. The farther away from the massive ice sheets, the better growing conditions became for a great diversity of trees.

Some trees of the far south and the middle United States were pushed southward by the advancing ice sheets faster than seed production and tree establishment would allow. Some populations of trees were trapped against the mountains or the sea. These populations which could not adjust to changing climate died out.

For Georgia, the last ice age caused many species changes. The northern quarter of Georgia was dominated by jack pine and several spruces and firs. These trees are now found around the Great Lakes and in southern Canada, or on the high peaks of mountains.

North Georgia also had scattered areas where mixes of larches, spruces and hardwoods grew. Larches are also now a Lake States tree. Southern pines and

Georgia's forests will continue to change into the future. The changing forest is normal, the preserved forest is doomed.

many of the oaks grew on drier, warmer sites, and on river terraces.

Falling sea levels produced much more area for tree growth. The Coastal Plain of Georgia was much larger in the past. All along the coast the shoreline may have been hundreds of miles further out than today. As the glaciers retreated and the oceans began to rise, tree populations were pushed to the ocean edge by glacial climate changes needed to move inland again.

Trees have no legs or way of moving except through widespread scattering of their off-spring. So rapid climate changes stress trees. Tree species are always in the process of adapting to climate patterns that change faster than the trees can adjust. Trees have not settled down from the last few centuries of change. Many populations are still moving north following the withdrawal of the glaciers.

Georgia has had a much different forest in the past. Because change is inevitable, Georgia's forests will continue to change into the future. The changing forest is normal, the preserved forest is doomed.

(Kim Coder is a forester with the University of Georgia Extension Service)

MISS GUM SPIRITS SELECTED FOR YEAR

Pretty Joni Dwozen said she practically "grew up" in her father's drug store in Milan and plans to pursue a career in pharmacy, but she is currently concentrating on her reign as Miss Gum Spirits of Turpentine.

The 17-year-old student at Dodge County High School won the title at the annual convention of the Georgia Forestry Association on Jekyll Island. She was selected from a wide field of contestants representing Georgia's naval stores producing counties. She will represent the industry for one year and one of the promotions will be a calendar produced by the American Turpentine Farmers which will feature her photograph.

The new queen for the industry said, "since I won the title many people have asked me what gum spirits means and I asked if they have ever noticed those little cups attached to all those pine trees in our part of the state." She confessed she doesn't know a lot about the industry but is willing to learn.

Miss Gum Spirits is the daughter of Freddie and Rhonda Dwozen of Milan. She is active in a dance group and a member of a tennis team in her school. She enjoys reading, listening to music and traveling. She will begin her senior year this fall at Dodge County High and after graduation plans to attend Middle Georgia College, later transferring to the Pharmacy School at the University of Georgia.

The student, who was regional winner in the JC Penney Seventeen Cover Girl contest, lives with her family on a 405-acre Certified Tree Farm near Milan. The farm has been in her mother's family since 1850 and



Jim Gillis of Soperton, president of the American Turpentine Farmers Association, congratulates Joni Dwozen of Milan, the new Miss Gum Spirits.

Joni represents the eighth generation to reside there.

She represented Eastman at the Rotary Youth Leadership Awards Conference, served on the Student Council at her school for four years, and was second runner-up in the Miss Georgia Forestry Pageant.



Tifton celebrates landscape grant acquisition. Left to right are Bob Ragsdale, Tourism Association; Sharon Dolliver, Forestry Commission; David Dixon, DOT; Patsy Bryan, Council of Garden Clubs; James Tidwell, Forestry Commission; Leroy Rogers, city commissioner; and Charles Kent, commissioner.

(Photo Courtesy of Tifton Gazette)

LANDSCAPE GRANT AWARDED TO TIFTON

The recently redesigned section of Interstate Highway 75 that passes through Tifton will soon be landscaped at its exits, thanks to a \$10,000 federal grant for beautification plus a matching fund for that amount from the Tifton-Tift County Tourism Association.

The challenge grant was provided under the America The Beautiful program and is one of several urban and community forestry initiatives administered by the Georgia Forestry Commission.

Sharon Dolliver, coordinator of the Commission's Urban Forestry activities and a member of the grant selection committee, accepted an invitation from local representatives to attend a luncheon celebrating the acquisition of funds.

VALDOSTA STUDENT NEW MISS GEORGIA FORESTRY



Miss Georgia Forestry said she is not a desk person but she poses as a pretty secretary as Ranger David Westberry acquaints her with some of the commission's literature.

If you saw a pretty, smiling girl soaked to the skin in her silk gown as she rode a prize winning float down Atlanta's rain-drenched Peachtree Street in the annual July 4th parade, you were seeing Kecia Strickland, Miss Georgia Forestry.

The televised parade was the first event in which the new queen of forestry will participate during her reign of one year. The good natured 20-year-old Valdosta State College student laughs about the soggy Atlanta experience and now looks forward to participating in other parades, festivals, regional fairs and other events to represent forest interests.

Kecia is the daughter of Mr. and Mrs. Roger Strickland of Waycross and represented Lowndes County at the state pageant on Jekyll Island, where she won the title in competition with 52 other young ladies. After another year of college in Valdosta, she plans to enter Georgia State University in Atlanta to study broadcast journalism. "One of my friends is in that profes-

sion," she said "and she is always telling how great it is."

The student said she is "a people person and not a desk person...I like to mix with people and work with words, and investigative reporting sounds exciting to me." She also finds singing exciting and considers music another career objective. She began singing when she was four years old and as a teenager she was selected for the Show Choir, a choral group representing singers from across the state that tours Washington, Chicago and other cities.

Miss Georgia Forestry, who was crowned by the retiring queen, Ann Bates of Ware County, plays the piano, likes to cook" when I'm in the mood for it" and attends Jamestown Baptist Church when she returns to Waycross to visit her parents, her brother Roger, 17, and sister Mandy, 13.

She recently toured the Georgia Forestry Commission headquarters in Macon and other facilities to become more familiar with forestry and its impact on the economy of the state.



GEORGIA YOUTHS TAKE SECOND PLACE HONORS

A team of youths from Georgia took home second place honors this year during the 12th annual National 4-H Forestry Invitational, a four-day event sponsored by the International Paper Company Foundation.

Team members were Clay Tomlinson, 17, Kristie Cason, 16, Stacey Tomlinson, 17, and Lynn Barber, 17, all of Homerville. Other team awards went to Alabama, first place; Arkansas, third; Louisiana, fourth; and Texas, fifth.

Participants tried their skills at tree measurement, forest evaluation and other forestry events

PHILLIPS HONORED

(continued from pg. 11)

graduation from the local high school, he attended Georgia Teachers College, a school known today as Georgia Southern University. He later served four years in the U. S. Navy, with a tour of duty in the Phillipines.

Phillips earned his degree in forestry at the University of Georgia after leaving military service. He entered the political arena in 1946, and with the exception of two years following reapportionment in his district, he served in the House until 1987, the year of his death.

The lawmaker's widow, Mary Ida, also a native of Treutlen County and a former school teacher, said her husband was intensely interested in promoting good forestry and conservation and that she is appreciative of the honor the university has bestowed on his name. She recalls having accompanied him to the annual conference of the Georgia Forestry Association for 30 years and to other functions that gave her an understanding of the importance of his work as a legislator.

Phillips was active in the Ohoopee Soil Conservation District and a long-standing member of the Lions Club, one of the organizations that supports Soperton and Treutlen County's mammoth Million Pines Festival each year. He taught a Sunday School class for 20 years at Soperton United Methodist Church.

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The book *Man and Nature*, which was published back in 1864 by Georgia Perkins Marsh, has been called the first environmental history and one of the sources of today's conservation movement.

Marsh drew on the past to illustrate how human actions had harmed the earth and led to the demise of earlier civilizations. Marsh wanted not only to warn his contemporaries against this fate but also to inspire measures to prevent it. One prevention measure that Marsh advocated was forest protection.

Marsh's concern for nature arose first from his childhood play in the forests near Woodstock, Vermont, where he was born in 1801. He was a bookish youth who was plagued with eye problems that forced him to cease reading for periods throughout his life; nature thus became his other teacher.

Marsh was a wide-ranging scholar who relied on common sense observations in his work. His firsthand observation of the rapid harvesting of Vermont forests led to his blaming the decline of fish upon this practice. Thus he began to note the relationship of soil, water, and plant cover that he wrote of later in *Man and Nature*.

FORMER EMPLOYEE DIES

Thomas B. Hankinson, of Martin, S. C. died recently from cancer. He was a 1949 graduate of the University of Georgia School of Forestry and was employed by the Georgia Forestry Commission for 20 years.

Hankinson worked at several locations with the Commission and had a statewide management project for several years. He was assistant forest management chief in the Macon office for ten years and was most recently a consulting forester in South Carolina.

TREE HOUSE PROTOTYPE BEING BUILT IN ATLANTA

There is a unique tree house being built in Bessie Branham Park in the Kirkwood Neighborhood in Atlanta with the deck in the shape of the United States.

Cooperators in the project, including the U. S. Forest Service, Georgia Pacific Corporation, City of Atlanta, Georgia Forestry Commission and the University of Georgia, are building the tree house to serve as an educational center on forestry and to familiarize children with the National Forests. The project in Atlanta is a prototype for similar tree houses that may be built in large cities across the United States.

Rising between two large trees, the Urban Tree House is high enough off the ground to give children the impression they are actually in the branches.

Displays space will be built in and around the deck. The displays will change periodically and will reflect the educational goals of the cooperators and highlight special events.

PARIS TO HOST CONGRESS

The 10th World Forestry Congress will be held September 17-26 in Paris, a first time for France to host the organization's annual meeting.

Planners said the general theme of the congress will be "Forests, A Heritage for the Future" and will offer the international forestry community an opportunity to discuss in depth the future role of forests, their use and conservation.

ANNUAL MEETING SLATED

The Forest Farmers Association is making plans for the 1992 Southern Conference and Annual Meeting to be held April 22-24 at Callaway Gardens. One of the features of the annual meeting next year will be a workshop on timber taxes, conducted by Dr. Harry L. Haney of Virginia Polytechnic Institute and State University.

ANNUAL RETIREE DAY IS SCHEDULED

The third annual reunion of retired employees of the Georgia Forestry Commission will be held Friday, September 27, at the Forestry Center in Macon. The reunion arrangements committee is urging all retired personnel and their spouses to attend. An entertaining day has been planned.

SEARCH FOR THE BIG ONES

Georgia's "Social Register of Big Trees" publication offers everybody an equal opportunity to go down in forestry history as the discoverer of a state Champion Tree. A champion tree is the largest of its species. All trees native or naturalized in Georgia are eligible.

Richard Jernigan, staff forester for the Commission who coordinates the state's Champion Tree Program, said the competition is "wide open" because numerous eligible species have never been entered. He pointed out that all tree species native or naturalized in Georgia are eligible.

"A lot of people think all the champion trees in Georgia have been found," Jernigan said, "but that's a long way from the truth. Existing records are frequently broken. There are plenty of native Georgia trees that have never been entered in the competition - and a long list of naturalized species that could be added."

Winning trees - with names of owners - are listed in state's "Social

Register of Big Trees" publication. If a state winner turns out to be a national champion, the listing is included in the "National Register of Big Trees."

There are currently 158 Georgia Champions," Jernigan said. "Sixteen of these are also national champions or co-champions. So there's always the chance that a Georgia winner could be a National Champion."

There is a mistaken notion that champion trees are found only in deep and remote woods, but records show that champions have been found everywhere from backyards to vacant lots in heavily populated urban areas; and many species are overlooked or ignored for various reasons. Georgia species for which no entry has ever been made are: Chalk Maple, Butternut, Carolina Hickory, and Hazel

Georgia State Champion Pecan Tree is examined by Richard Jernigan, Commission staff forester who coordinates the Champion Tree program.



Alder.

Jernigan said some species are not entered because they are not as abundant as others. However, other species may not attract attention because a champion might be relatively small compared to other winners.

"For example," Jernigan said, "the national champion Eastern Baccharis is only 21 feet tall with a one and one quarter inch circumference and 20-foot crown spread. So anyone not familiar with the species probably would not be impressed with this tree."

Contrasting examples are three huge Georgia Champion Trees that are not big enough to qualify as national champions: An Eastern White Pine 145 feet tall, a Live Oak with 35 foot circumference, and a Southern Red Oak that has a crown spread of 152 feet.

"The lesson of these comparisons is that you have to know your species and know what you're looking for," Jernigan said. "There have been cases of champion trees going virtually unnoticed for years while crowds of people walked by them every day."

Champion Tree Competition entries require the following three measurements: circumference, height and crown spread. The trunk circumference is measured at four-and-one-half feet above the base of the tree. Height is measured from the base of the tree to the highest twig. Average crown spread is determined by tracing an outline of the crown directly beneath the outer branch tips; using an imaginary line passing through the center of the trunk, the longest and shortest distances are measured from the imaginary line to the longest and shortest points of the crown outline. These measurements are added, then divided by two to get the average width of the tree's crown.

All Champion Tree nominations should include the following information: three required measurements, Latin genus and species, location of tree (detailed enough for someone unfamiliar with area to find it), date measured and by whom, name and address of property owner, description of tree's physical condition, photo of tree and date photographed.

Nominations and requests for further information should be submitted to: Georgia's Social Register of Big Trees, Georgia Forestry Commission, P. O. Box 819, Macon, Georgia 31298-4599.

Georgia Forestry/Fall 1991/19



John Wells, Commission researcher, checks forestry export potential on computer maps of Europe. Last year, Wells generated millions of dollars in forestry related export trade for Georgia. Products ranged from raw material to finished products.

COMMISSION RESEARCHER GENERATES \$6 MILLION IN FORESTRY EXPORTS

By Bill Edwards

Last year, Commission employee John Wells generated \$6.4 million in forestry related export trade for the State of Georgia. The conservative estimate was determined by a detailed spot check of eight companies on Wells' list of 200 such organizations.

Assigned to the Commission's Forest Research Department, Wells works "on loan" with the Georgia Department of Industry and Trade with the primary objective of increasing Georgia's forestry related export

business. Exports range from equipment to raw materials and finished products. Working from an Atlanta office under the job title of Staff Forester/Marketing International Trade, Wells spends 90 percent of his time cultivating export trade. Wells said solving problems of export potential is a team effort of the Commission; specialists in different fields are assigned to various situations.

"I work with around 35 to 40 Georgia companies on a regular basis," Wells said, "but an irregular contact under the right circumstances can be just as rewarding to the state's export market." He cited an example of acting as a liaison between a Georgia company and a foreign agent. The result was a \$½ million equipment sale to a foreign country.

"The time was right and it happened," Wells said. "I acted only in an indirect capacity, but the result

were good."

Much of Wells' job is a delicate balancing act of knowing when the time is right to act - and how to implement the action properly in accordance with international trade needs. A graduate of the University of Tennessee-Knoxville, Wells has two degrees in forestry: a bachelor's degree in forest management and a master's in forest economics.

CONCEPTS PROMOTER

Wells describes his position as "promoter of economic export concepts." He spends a third of his time in national and international travel, but insists that the job is not the glamorous travel position many people envision. He says the hard work of coordinating foreign trade shows dilutes initial delusions of glamour.

He said that after 12-hour days of trying to determine the needs of foreign buyers, at times requiring the skills of an interpreter, there is little or no time for tourist activities. Although he does not mention specific countries, Wells also points out that the accommodations are not always what might be expected for the price. Cramped rooms, with inadequate heating and air conditioning are sometimes the reward for U. S. luxury hotel prices.

"But when everything is considered, I like it," Wells said. "It's especially satisfying when you can get the wheels turning on a situation that is mutually beneficial to Georgia, the U. S. economy, and the foreign countries involved."

WIDE TRAVELS

Wells' export-seeking itinerary include: England, Canada, Italy, Switzerland, France, Belgium, Jamaica, Trinidad and the Dominican Republic. Everywhere that Wells goes on his foreign travels, he encounters certain customs that have to be followed to create a good impression. Some of the customs are very strange to Americans and Wells emphasized that insults can be transmitted without the perpetrator knowing any knowledge of it.

Wells gives the example that in Arab countries one should never cross his legs because others present might see

"It's a world economy now. The U. S. has resources that the rest of the world wants and this is potentially good. But world markets change and we need to be ready to adapt."

the sole of his shoe; that is considered an obscene gesture. In South American countries, a U. S. citizen should not refer to himself as an American; residents of these countries also consider themselves Americans.

"It goes on and on," Wells said. "You have to be careful. For instance in Bulgaria you could turn down an agreement and think you had accepted it. If you nod your head, it means no; if you shake your head from side to side, it means yes."

After all the protocol has been taken care of and an export market has been identified, Wells approaches Georgia companies. "At this stage, I deal in generalities, never specifics," Wells said. "I can walk you step by step through an export situation, but I avoid discussions of prices like the plague, and I never tell anyone that they can expect big profits from exporting goods. There's a profit potential, but the margin should not be expected to be any higher than it would be domestically."

Wells said the basic reason for a company to consider exporting is the benefits of diversification. He said the export market should be approached from the the diversity perspective that is inherent to a sound investment portfolio. The result should be eco-

nomically flexible with protection and varied potentials.

"It's a world economy now," Wells said. "The U. S. has resources of the rest of the world wants and this is potentially good. But world markets change and we need to be ready to adapt."

Wells gives an example of the changing import-export relationship with Korea, Taiwan and Japan. He pointed out that all these countries used to be considered cheap labor markets. Now, however, much of the labor in these countries is more costly than in the U. S.

WHOLE HOUSE MARKET

"So markets have changed," Wells said. "For instance these countries used to be interested in just buying raw materials like logs. Now they're wanting to buy whole houses (prefabs) because their labor is so expensive."

With all the continuing changes in the export markets, there's plenty for Wells to do abroad. However, one of his primary objectives is to make time for travel within the U. S. to bring business to Georgia from other states.

"I would enjoy traveling more in the U. S.," Wells said. "I know the customs here."





BACKYARD BIRD SONG, By Richard K. Walton and Robert W. Lawson. Houghton Mifflin Company, Boston - \$19.00

There's music among the trees in your own backyard.

Walton and Lawson recently produced a tape, along with a printed guide, to help the homeowner gain a new perspective of a very familiar place, his own backyard. They did it by presenting the authentic songs of the common backyard birds of eastern North America.

The authors believe that persons who spend a reasonable amount of time with the audio guidebook and tape will soon be able to recognize the songs of 28 common backyard birds.

THE "POSSUM HUNTER AND THE TAR HEELS, By James S. Willoughby. Tall Timber Publishing. The Rock, GA - \$12.50.

A Georgia author has relied on his long career as a naval stores operator, tree farmer, sawmiller and related pursuits for the authentic background of his novel. Although it is a historical novel of post Civil War days, Willoughby's vast knowledge of the naval stores industry and its importance in the economy of South Georgia for many years is reflected in his writing. (See feature story Page 4).

A NATURAL HISTORY OF TREES (Eastern and Central North America) by Donald Culross Peattie. Houghton Mifflin Company, Boston - @ 16.95.

Peattie doesn't dwell long on bark, flowers, fruit, wood density, geographic range and other descriptive details when writing of the various species of trees, but takes the reader on an adventurous journey back into American history to clearly reveal how the nation depended so heavily on the great natural forests in the development of its economy, its politics, its culture. The 606-page volume is educational and yet entertaining, with a generous sprinkling of little known but fascinating tidbits pertaining to man's imaginative use of wood down through the ages. This enormous contribution to tree enthusiasts and nature lovers is generously illustrated by dozens of fine old woodcuts.



MACE IS NAMED DEAN OF FORESTRY SCHOOL

Arnett C. Mace Jr. has been named dean of the University of Georgia School of Forest Resources by University President Charles B. Knapp. Mace assumed his new position following the retirement of Leon A. Hargreaves.

Mace served as a professor and director of the School of forest Resources and Conservation at the University of Florida since 1978. Before joining the University of Florida faculty, Mace was professor and head of the department of forest resources at the University of Minnesota, where he was a faculty member for 11 years.

"I have been impressed with the quality of faculty and administration at The University of Georgia and with the community of Athens," Mace said. "I'm looking forward to the opportunities in the School of Forest Resources to contribute to forestry education and research."

Mace earned a bachelor's degree from West Virginia University and a master of science and doctoral degrees from the University of Arizona. In 1987,

William F. Prokasy, University of Georgia vice president of academic affairs, said, "We are fortunate to have attracted Professor Mace to the deanship of the School of Forest Resources. He has had a highly respected and nationally recognized career as dean at the University of Florida.



FIELD DAY

(continued from page 3)

be of benefit to landowners who stop by the station.

LOW COST REGENERATION - Larry Bishop, U. S. Forest Service, and David Moorhead, Extension Service. In many cases it's better to let nature do the planting. The selection of seed trees to leave during a timber harvest and other valuable information for the landowner who wants to take advantage of this low cost method of establishing a new forest.

MARKETING TIMBER - James Alfriend and Wesley Stephens, independent forestry consultants. Selling your timber for the best profit after receiving bids from more than one reliable buyer and making sure provisions in the contract fully protects your property will be discussed.

PINE STRAW MANAGEMENT - Dennis Martin, Forestry Commission and Larry Tankersly, Extension Service. Pine straw production is a relatively new way to profit from pinelands. Proper tree spacing for future straw harvesting and selection of species that produce the best straw are points to be discussed for those who are seriously considering this rapidly growing market.

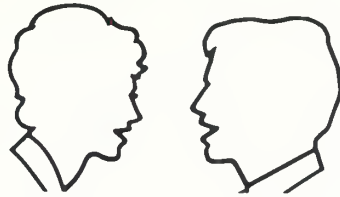
PRESCRIBED BURNING - Lynn Hooven and Larry Thompson, Forestry Commission. Fire is an enemy of the forest, but it is also a friend. When properly used it can be an invaluable silvicultural tool. Professional foresters will discuss the techniques of a safe and highly beneficial burn.

RECREATION - Walter Cook, Jr. and Daniel William, School of Forest Resources, UGA. In multi-purpose forestry, recreation plays a significant role. Picnic areas, fishing ponds, nature trails and camping sites will be some of the topics to be addressed at this station.

The pre-registration fee for the field day is \$8.00 and must be made not later than September 16. The fee after that date will be \$10.00. The price includes lunch and an opportunity to win thousands of dollars worth of prizes. Free soft drinks will be served throughout the day and the first 1,500 person to register will receive a hat and a detailed guide book that will be useful to the landowner long after he has returned home.

Checks should be made payable to LFMFD and mailed to LFMFD, c/o Albee E. Smith. Dial 1-800-GA TREES for additional information.

PEOPLE

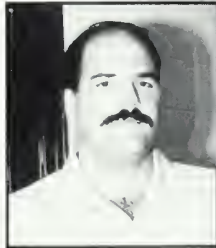


IN THE NEWS

TOM LAMBERT, who came with the Commission in 1988 as a patrolman in the Carroll County Unit, has been named ranger of the Lee County Forestry Unit. A native of Carrollton, the new



LAMBERT



ROGERS

ranger is a graduate of Villa Rica High School and has earned associate degrees in agri-business and agriscience at Abraham Baldwin Agricultural College. He fills a post recently vacated by the death of Ranger Jeff Everon. Ranger Lambert, worked with a chemical research company prior to his employment with the Commission. He and his wife Jan have two daughters, Ree and Dana. They attend the Baptist Church . . . FORESTER DAN ROGERS, a native of Wisconsin and a graduate of the University of Wisconsin, has worked with the Commission in urban forestry in recent months, serving Brunswick, Albany and several other cities in South Georgia. He recently resigned from his position



HAMRICK



CRATON

under the Education and Information Department to accept employment as the forester in Missoula, Montana...MICAH HAMRICK, a patrolman in the Haralson County Unit since 1986, has been named ranger of the Bulloch County Unit. A native of Haralson County, the new ranger is a

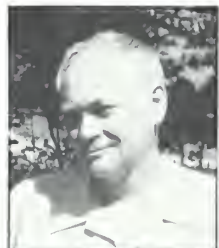
graduate of Pepperell High School in Rome and he attended Tennessee Temple University for three years. Hamrick and his wife Jody and daughter Lindsey, 6, are members of the Baptist Church...Hamrick succeeded Ranger AL CRATON, who served with the Commission for 32 years prior to his recent retirement. Craton and his wife Brenda have two married children, Carol and Michael. More than 50 people attended a retirement dinner honoring the veteran GFC employee...RANGER MAURICE MATHEWS of the Oglethorpe County Unit recently retired after 33 years of service. Many co-workers and other friends honored



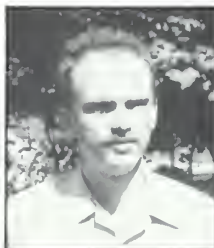
WALTERS



LANE



WEST



WALLACE

him at a retirement party. The couple is active in the United Methodist Church. RANGER TRACY GRAHAM transferred from the Americus District to replace Mathews...BETTY WALTERS, a native of Ashburn and principal secretary in the Commission's Eighth District since 1976, has been promoted to administrative secretary to succeed the recently retired CATHERINE KELLY in the Information and Education Department at Macon headquarters. The secretary and her husband Leonard, who is retired from a career in the U. S. Air Force, have four children, Tina Danron, Leonard, Jr., Michael and David. The couple has

moved to Bibb County. They are active in the Baptist Church...ROGER LANE, who served as a patrolman in Lumpkin County since 1988, has been named forest ranger of the Banks-Hall County Unit. A native of Oklahoma and a graduate of Edison High School in Tulsa, the new ranger was previously manager of a pipeline construction company in Orlando, Fla. Lane succeeds BOB MCDONALD in the unit. The ranger and his wife, Bobbie Sue, attend Antioch Baptist Church. They have two grown children, Peggy Sue and Roger...WINSTON WEST, forest specialist at the Dawson Demonstration Forest who came with the Commission as assistant ranger of the Wilkes County Unit in 1960 and served in several capacities in four districts, retired in August. The forester, a graduate of the School of Forest Resources, University of Georgia, is a native of South Carolina. He served four years in the U. S. Navy, with some duty in Korea. The forester and his wife, the former Betty Bennett, have three grown children, Harold, Cheryl and Laurie. Gainesville District personnel and other friends honored the retiree at a dinner in Gainesville...GREG WALLACE is the new ranger in the Forsyth County Unit. He came with the Commission as patrolman in Forsyth County in 1985 and received the promotion in June. The ranger is an honor graduate of Forsyth County High School and attended Gainesville College. He worked for a printing and office supply company prior to his GFC employment. Wallace and his wife, Samantha, have an infant daughter, Jesi Elizabeth. The family attends Pleasant Grove United Methodist Church... Fellow employees and others gathered at a restaurant in Statesboro August 24 to honor RANGER WARREN COOK, Chatham County Unit, at a retirement dinner. Cook, a native of Candler County, came with the Commission as assistant patrolman in the Candler County Unit in 1959 and was named ranger in Chatham in 1964. The retired ranger and his wife, Faye, and daughter, Jincy, attend Pooler Baptist Church...



MATHEWS



COOK



Autumn is in the air...

The humid days of summer are giving way to the cool, crisp days of fall, a time when many Georgia landowners make plans to plant profitable pine trees on old, unproductive farm fields and on recently harvested timber tracts. Millions of quality seedlings are on order for fall and winter planting, but landowners who have not yet ordered are urged to reserve trees by contacting the Commission nurseries or the local county forestry office. Forestry in Georgia now represents a \$12.1 industry and the first step in sustaining that economic contribution to the state has to be reforestation!



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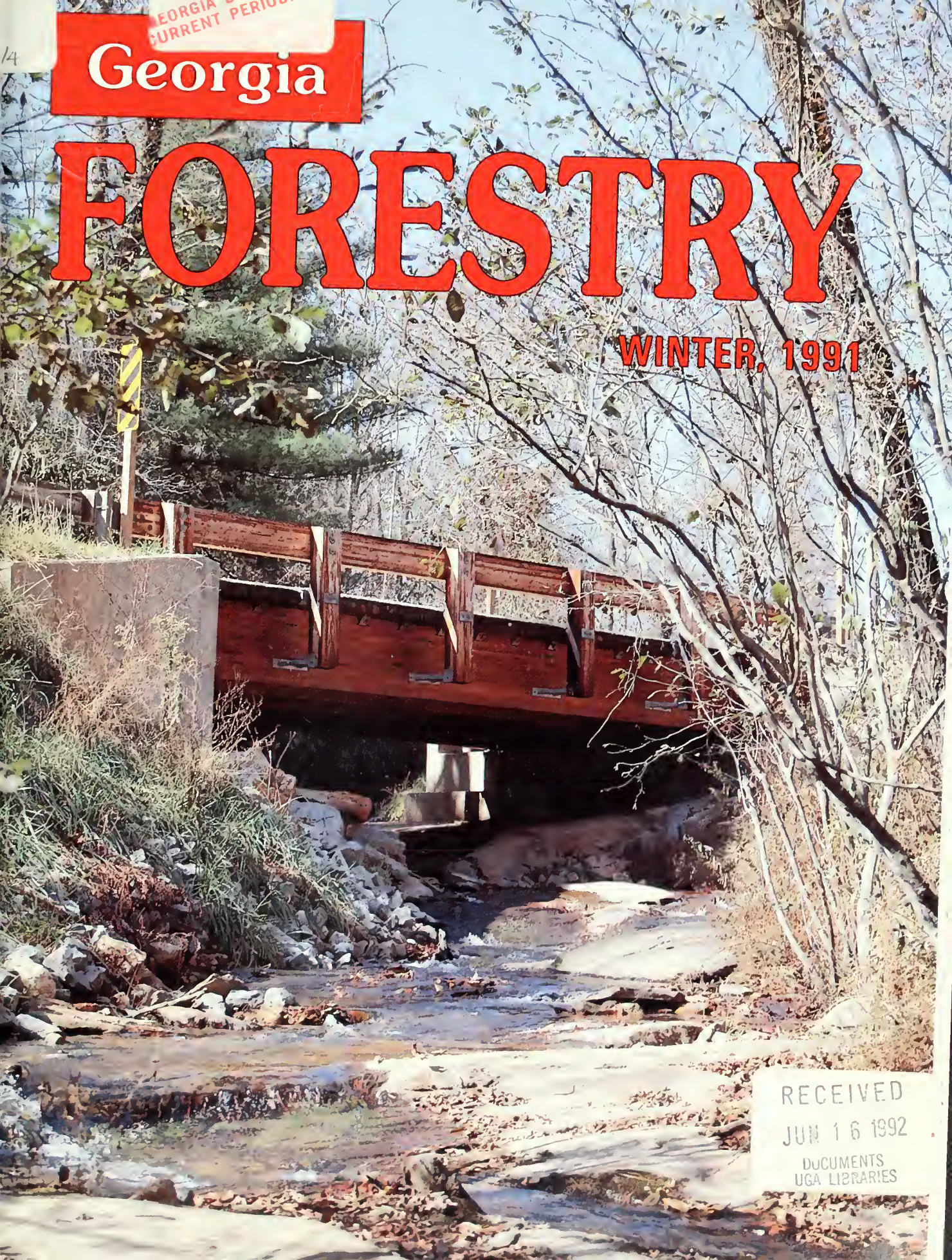
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The shedding of leaves is another of nature's wise provisions for winter. Broadleaf trees of the north shed their leaves and, as a result, their branches will more easily bear the winter's burden of snow and ice. In the southern states where there is no snow or ice, some broadleaf trees are practically evergreen.

The conifers - pines, spruces, cedars, firs and hemlocks - have no definite time for leaf shedding. Their leaves are either needle or scalelike - a form adapting them to the shedding of snow.

Through fallen leaves, nature has also provided for a fertile forest floor. Although the food prepared in the cell cavities of the leaves is returned to the tree in the fall, mineral substances with which the walls of the cells have become impregnated during the summer months are retained. Therefore, fallen leaves contain relatively large amounts of valuable elements, such as nitrogen and phosphorus, which were originally a part of the soil.

Decomposition of the leaves enriches the top layers of the soil by returning the elements borrowed by the tree and at the same time provides for an accumulation of water-absorbing humus.

ON THE COVER - This wooden bridge in rural Georgia is one of several built in the planning stage under a cooperative effort to replace defective spans on secondary roads. The Georgia Forestry Commission is working with the U. S. Forest Service and county officials on the project which employs new engineering techniques in the wood bridge construction.

(Photo By Billy Godrev)

GYPSY MOTH NOT YET SERIOUS THREAT TO GEORGIA

An isolated population of gypsy moths has been documented in White County and the infestation covers approximately 5000 acres in land around Dukes Creek, according to Terry Price, the Commission's Entomologist. The gypsy moth is a hardwood defoliator that was introduced in Massachusetts from Europe over a century ago. Since that time it has thrived and continues to expand its range west and south. Currently, all of the north-eastern states and portions of Michigan, Ohio, West Virginia, Virginia and North Carolina are considered generally infested and came under quarantine regulations.

Total acreage treated fluctuates from year to year, but in 1990 a total of 1.4 million acres were treated to prevent or reduce impacts from gypsy moth at a total cost of about \$25 million.

Since the adult female gypsy moth cannot fly, the natural spread of gypsy moth south and west from the quarantine area is relatively slow. "Based on historical data, if this moth continues to spread at the same rate (15 miles per year) it will be 20 to 30 years before the advancing front of gypsy moth populations envelop North Georgia and widespread defoliation requires yearly suppression efforts,"

Price said.

The Entomologist exclaimed, however, that the moth is so easily transported by man that isolated infestations, such as the one in White County, became established "as the result of long distance, man-caused spread." He said moths deposit eggs on all sorts of objects and egg masses have been found on mobile homes, cars, trucks, boats and trailers, pop-up tents, firewood and patio furniture. People unknowingly transport the egg

masses when leaving infested states to travel cross country.

The Commission uses pheromone baited traps to locate isolated infestations that result from the movement of people. White County has been one of many counties in Georgia that has been intensively trapped since 1986. Due to the trapping, the personnel have been able to locate the current small infestation.

Price said plans are underway to treat approximately 5,000 acres of woodlands with BT (*Bacillus thuringiensis*), considered one of the safest gypsy moth control/eradication products available. The material is a naturally occurring bacterium that when ingested by caterpillars eventually kills them. The Commission has begun to inform residents of White County of the eradication treatment to begin in April of 1992. Eradication is timed with the caterpillar emergence in the spring. The project will be a joint effort of the Commission and the U. S. Forest Service. If the eradication is successful Georgia may very well be free of the pest until the advancing front arrives sometime after the turn of the century.

At Present Rate, It Will Be "20 to 30 Years" Before Advancing Front Of Population Reaches North Georgia.



BALSAM FIR CAN BE GROWN AT A PROFIT IN GEORGIA



Dillard inspects trees ready for the Christmas market.

A North Georgia Tree Farmer now has marketable proof that the highly profitable balsam fir can be commercially grown in certain sections of the state for the Christmas tree market.

Fifteen years ago Malcolm Dillard planted an experimental crop of balsam fir in Rabun County, located in the northeastern tip of Georgia bordering North Carolina.

At the time, it was unheard of to grow balsam fir commercially in Georgia, but Dillard is an innovative forester and wanted to tap the Christmas tree market with a popular species. Some people told him that it could not be done; others told him it was not worth the long range speculation to be a pioneer.

During this Christmas season, a crop of balsam fir grown on Dillard's property was trucked to Florida and averaged selling at a high retail price. Several North Georgia Christmas tree farmers followed Dillard's encouragement and are now successfully growing balsam fir.

The balsam fir that went to this

year's Florida Christmas tree market from Dillard's farm were sold to a Manchester tree farmer, Buddy Emfinger, when the trees were three years old. The young firs were sold with a crop of spruce when Dillard found his full-time job in Atlanta prevented him from properly caring for the trees.

"If I wasn't the first to commercially grow balsam fir in Georgia," Dillard said, "I don't know who else was trying

it at the time."

Dillard, who works out of the Atlanta headquarters of the Department of Education (Vocational Agriculture) as a vocational forester, started as a Christmas tree farmer 30 years ago, so he knew the potential for wasted time and money with his speculative venture.

"Actually, I tried to grow Fraser fir before balsam, but only about 20 per cent lived," Dillard said. "There just wasn't enough elevation. Elevation is only about 2100 feet in Rabun and you need to be 3500 to 4000 feet."

Dillard said Fraser fir grows prolifically only 13 miles away in Highlands, North Carolina, but the elevation increases in this short distance from 2100 to 4000 feet. Highlands is the highest incorporated town in the Eastern United States.

"Some people will tell you that elevation is not that much of a critical factor in growing Fraser fir, since both are cold weather trees," Dillard said "but after experiencing survival rate of only 20 percent, I believe different."

**Fraser fir grows
prolifically only 13
miles away in
Highlands, North
Carolina; but the
elevation increases
in this short
distance from
2100 to 4000 feet.**

So he tried balsam fir because "only the trained eye can tell the difference." He found that balsam fir not only survived with an excellent survival rate, but grew faster than the adjacent spruces that include white, Norway, blue, and Serbian spruce.

He considers terrain and climate to be critical factors in successfully growing balsam fir. He said that soil should be brown or black loam located in a sloping area that drains well - preferably with northeast exposure.

RETIREMENT PLANS

When Dillard retires in several years, he plans to devote full time to his balsam fir Christmas tree farm and take full advantage of the Florida market. He said that Georgia also has a good market, but "a lot of northerners are retired in Florida and grew up with the balsam or fraser fir as the traditional Christmas tree; it reminds them of home." He also pointed out the balsam's superb form - with trunks as straight as a pole - makes it a favorite Christmas tree for many people, regardless of where they live.

Dillard's method of planting balsam is 5x5 foot spacing which supports 7,742 trees per acre. He said that some planters might consider this spacing too close and prefer 6x6 foot spacing, which supports 1,210 trees per acre.

Judging from 30 years in the business, Dillard said the Christmas tree market remains changed very little for good quality trees." However, he considers it a risky business for growers turning out "marginal quality trees," because of the increasing public demand for better quality Christmas trees.

Dillard sums it up simply: "Growers producing good quality trees will continue to do well. Those who don't will go gone."



Bob Williams new president of Georgia Christmas Tree Growers Association.

Bob Williams, who retired from the U. S. Forest Service in 1986 and now owns and manages a Christmas tree farm in the scenic Salacoa Valley in Cherokee County, is the new president of the Georgia Christmas Tree Growers Association.

More than 165 growers in the state currently hold membership in the association and two meetings are usually held each year, with one highlighted by a tour of a member's tree farm.

Williams pointed out that all Georgians growing Christmas trees are not members of GCTGA, but he said "they should be." The veteran forester contends that the association offers "much valuable information that greatly benefits" those in the business.

The group's president said Christmas tree growing is a labor-intensive operation that requires year round attention. He said many will try if for a short time and then drop out when the pitfalls become obvious. The association helps provide guidance and encouragement to growers across the state, according to Williams. "The planting is easy," he said, "but after that comes the hard part and that's where the association can help."

Member farms range from a red cedar farm of 200 trees in Oconee County and a farm of 100 pine in Gwinnett County to large scale producers with 50,000 trees in Crisp and Monroe Counties, according to the association's latest directory.

Williams said he started by planting four acres and made annual increases until he peaked at about 35 acres. Now he has trimmed his volume and said he concentrates more on quality. His operation is similar to many other members in that he invites customers to make their visit a family adventure when they come out and choose and cut their tree. Customers have an opportunity to ride a hay wagon from the sales barn to the field and hot apple cider is often served. Williams and many others sell wreaths and other Christmas-related items at the farm site.

Most members grow Virginia pine, but some offer additional species. At least 70 sell red cedar, the second most popular tree. A few sell Leyland cypress and other pine species.

In the past few years, the association has cooperated with the National Christmas Tree Growers Association in an advertising campaign to convince the public that the traditional live tree is more meaningful than the artificial "tree" at Christmas time. Williams said the trend toward the plastic tree seems to have leveled off, but it continues to offer lively competition in the marketplace.





YULE TREE RECYCLING SCHEDULED

Another Christmas tradition is gaining ground in Georgia and it comes around in the first week of January in the new year.

Thousands of citizens will take down their Christmas trees on January 4 and haul them to a convenient collection site where they will be

recycled. Some will be fed into a chipper and converted into valuable mulch for city parks and other public areas while others will be used in erosion control and the improvement of fish habitat.

The Urban Forestry Division of the Georgia Forestry Commission, one of

the partners in the statewide environmental project, is urging additional residents this season to join the hundreds of thousands of Georgians who brought in 275,000 trees last year. The program has grown from 20,000 trees when it was organized in 1988.

Contact your local Clean and Beautiful Commission office for the location of the nearest recycling center.

Those participating in the campaign receive a tree seedling in exchange for their Christmas trees.

The recycling effort last January diverted 36,000 cubic yards, or the equivalent of 4,000 dump truck loads of waste, from landfills. Most of the trees were chipped into mulch for use on community plantings as fertilizer or to provide erosion control and protection from drought. In Richmond, Barrow, Hart, Monroe and Houston Counties, the Christmas trees collected were dropped in area lakes to provide places for fish to live. Some of Savannah's trees were used to build up sand dunes on Tybee Island, and Dougherty County's trees were used by Procter and Gamble Paper Products as an alternative fuel source.

The successful recycling effort was coordinated by the Georgia Department of Community Affairs Clean and Beautiful Program and underwritten by Georgia Power company.

The company printed and distributed promotional flyers and directional signs. Georgia Power also offered assistance through its local company offices and purchased 150,000 seedlings for free distribution.

Several other corporate contributors played a key role in the project. WSB-TV of Atlanta produced and distributed public service announcements to promote the recycling program and The Atlanta Dogwood Festival and Technology Park/Atlanta, Inc. provided 30,000 dogwood seedlings.



Top Photo: Persons are given tree seedlings as a reward for bringing their Christmas trees to the recycling center in Macon. At left, a steady stream of vehicles brought in trees during the campaign last January.

WOOD TECHNOLOGIST CREATES A SUPERIOR PACKAGING MATERIAL

curls could replace phoney
peanuts and poisoned popcorn

By Howard Bennett



UGA professor experiments in wood laboratory.

A lot of Christmas gifts shipped directly from the manufacturer this season were packed in those pesky little foam pellets that seem to have no further purpose than to scatter all over the rug and under the sofa when you unpack the box.

The packing material, known in the trade as "foam peanuts," has been around for many years, but a professor at the University of Georgia feels it's about time the spongy stuff is phased out to make way for a superior product and an environmentally safe product he created earlier this year.

Dr. Jim Rice, of the university's School of Forest Resources, has perfected a way to turn out clean, light, resilient and completely recyclable wood curls that should be ideal for the safe packing of a delicate vase or lamp, sensitive equipment, expensive crystal, dinnerware or other fragile objects.

The professor wasn't seeking a better way to package merchandise when he came upon the wood curl in his experiments. Actually, he was working at the request of an Atlanta client to find a way to economically produce wood shavings for fragrant potpourri. Some coarse wood pieces are found in potpourri on today's market, but it consists mainly of botanicals and the

industry was interested in something much thinner and more attractive than the planner shavings that are currently used.

Dr. Rice, who holds a degree in forestry from Auburn University and majored in wood technology at North Carolina State, where he earned Master and Doctorate Degrees, set to work modifying the knives on a disc flaker—a machine used in the production of structural flakeboard and similar construction panels. He experimented with many settings until he found the proper blade configuration that would produce a sliver of curling wood.

The professor soon realized, however, that the project had headed into a different direction. The critical adjustments on the knives resulted in a clean, spring-like curl that would be more suitable as a packing material than serve as scented chips in potpourri baskets. The inventor had hit on a packing material that would be perfectly biodegradable, a product that would not be thrown away, but have secondary uses such as a mulch for plants, a pet litter, a fire starter for the fireplace and others.

Vince LaTereza, an attorney for the university who is helping Rice secure a patent, termed the development a breakthrough for companies that have sought more environmentally sound

methods of packaging their products.

Rice and the university's research foundation are currently working with two companies that have shown keen interest in the product and a much greater response will surely come now that the United Press and Cable News Network have picked up the story.

The wood curls also could replace popcorn (real popcorn, that is.), another material manufacturers found to be an effective, inexpensive cushion to protect merchandise. It seemed to be ideal for packing until it was found that insects liked to hitchhike in the edible material. Shippers began spraying with pesticides to eliminate the bugs, but that brought on another problem; some humans ate the pesticide-laced popcorn. Street people and other persons rummaging through garbage cans and boxes for food were known to eat the poisoned material.

Wood particles have been used in the past for packing and Rice is often asked why excelsior, a tangle of thin wood strands that preceded the foam peanut, is no longer popular. The wood technologist explained that excelsior, which is still being used to some extent, has to be manually stuffed around items that are packaged, while foam peanuts and the

(continued on page 23)



A properly constructed logging road is essential to a good timber harvesting operation.

HARVESTING PRACTICES CLOSELY MONITORED

There was a time when a careless logger could build the kind of forest roads and log decks during a timber harvest that would lead to soil erosion and sedimentation in adjacent streams and wetlands and the landowner would not be overly concerned with his shoddy performance.

The landowner would end up with his property damaged, but he would not be held responsible for having hired such an irresponsible logger, even when his neighbor's land and property far downstream were affected by the gross negligence.

But times have changed. There is now great public concern over environmental problems; there are demands for stricter control over our natural resources.

According to the Environmental Protection Division (EPD), the landowner is now ultimately responsible for

activities on his land that may cause water quality or wetlands violations. The determination of EPD in carrying

Seriousness Of Harvest Problems Stressed In Workshop Series

out environmental protective measures is reflected in its penalties; a landowner could be fined for each day of violation.

Staff Forester Frank Green of the Georgia Forestry Commission is state coordinator for the program. He planned a series of December workshops in cooperation with the Cooperative Extension Service to apprise landowners of the seriousness of the problem and provide measures they can take to protect themselves.

"In my work I often hear complaints about loggers from landowners who have recently sold timber," Green said. "They say the loggers fill the creeks with debris, scar the land with eroding logging roads, and literally trash the property with oil containers, old tires, cables and even human waste."

The coordinator said he always asks if they used the services of a professional forester or insisted on a properly written contract. "In most instances", he said, "their answer to both questions is 'no.'"

Green advises landowners to

engage a professional forester who would (1) determine a fair stumpage price for the timber, (2) point out sensitive areas on the tract that would need special protection, (3) locate and lay out roads, log decks, stream crossings, etc., (4) develop a contract with these concerns in mind, and (5) monitor the logging operation to assure the landowner that all conditions are met.

The Forestry Commission was designated by the EPD in 1978 to coordinate the forest water quality program. Since that time, Green and others with the Commission have conducted numerous workshops, seminars and demonstrations to promote measures called "Best Management Practices." The measures, often called BMP's, are guidelines now used by thousands of Georgia landowners in managing their natural resources.

Green pointed out that a wealth of literature dealing with the subject has been created over the years and various booklets, bulletins and other printed pieces are available at all Commission offices. He said a sample "Timber Sale Agreement" for landowners, which lists the BMP's, is also available.

As a requirement of the Clean Water Act, the Commission recently conducted a survey to determine BMP compliance among all landownerships. Overall, compliance was lowest by the private landowner when compared with forest industry and U. S. Forest Service. In addition compliance was generally lower in the mountains than in the coastal plain or all ownerships.

Problems noticed most were poorly constructed logging roads, improper stream crossings, and logging debris left in streams. With advanced planning and appropriate timber sale contracts, most of these problems can be easily avoided.



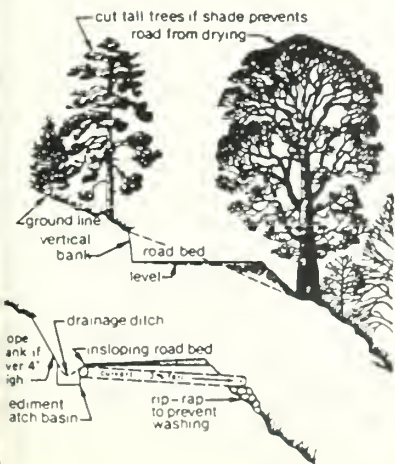
A renewed emphasis on the importance of forested wetlands has prevailed in recent years and a definition of these lands and their benefits to the environment are found in the excerpts from the booklet, Best Management Practices for Forested Wetlands in Georgia:

Georgia's forests provide a tremendous variety of goods and services for the people of the state and region. If properly managed, using good conservation practices and techniques, these forests can provide continued and improved benefits, even with the pressures of increased population and urbanization. Wetlands have been recognized as one of the nation's important resources.

Wetlands are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Georgia's forested wetlands are an important component of the state's forests.

The south's fourth forest report identifies 3.5 million acres of bottomland hardwood in Georgia. In addition, portions of several other forest types are classified as wetlands. These wetlands have many functions and values, among which are: water quality, timber production, fish and wildlife habitat, scenic beauty, recreation, education and research...

Best Management Practices have been developed by a task force representing a wide range of interests in forested wetlands. Properly and carefully implemented, BMPs will protect and enhance important wetlands functions on most sites under most weather conditions while allowing economic silvicultural operations. Some wetlands sites are not suitable for commercial timber production. On extremely sensitive sites or in extremely severe weather conditions, more stringent measures may be required. These BMPs are designed and intended for silvicultural operations where sustained timber production is one of the landowner's objectives...



A lone reconnaissance helicopter whirled above the great Okefenokee Swamp as shadows lengthened. The pilot was about to call it a day when he spotted a small fire of less than a quarter of an acre in size near Jack Island. Unfortunately, the aircraft was low on fuel and could not begin an initial attack before refueling in Waycross 40 miles to the north. By the time the pilot was able to return for a water drop, the fire had grown to several acres and was racing too rapidly across the dry swamp for the pilot to handle.

The date was August 1, 1990 - a day to be long remembered by the Georgia Forestry Commission. The small fire grew in intensity and size and before it was finally subdued two months later, it had burned 20,773 acres of swamp and forestland, required the largest deployment of forest firefighting manpower and equipment ever in Georgia and cost \$9 million.

It went down in the record books as Fire 4275-Short's Fire.

DIARY OF A MAJOR FIRE

SEPTEMBER 1: Additional resources, including hand crews and helicopters, were ordered and the Commission began plowing firebreaks to protect threatened areas, but the fire continued to spread rapidly within the swamp and by the end of the day it had spread to 15 acres. State office personnel were notified.

SEPTEMBER 2: Fire has now grown to 225 acres as tractor-plow units continued to prepare uplands adjacent to the swamp for a major run.

SEPTEMBER 3: It was Labor Day, it was no holiday for the firefighters as the inferno spread to 800 acres over the dry swamp. Flames were 75 feet high. At 8:00 p. m., the final run of the day drove the fire out of the swamp, across the refuge boundary and onto Container Corporation lands. Resources on the scene now included 20 tractor-plow units, three engines, a 9,000-gallon water tank truck, three helicopters and 57 firefighters. Suppression activities were concentrated on halting the spread of fire on private lands.

SEPTEMBER 4: As the fire continued to spread, crew worked on fast moving flanks along the swamp's edge. Helicopters fought to cool advancing heads as ground crews worked to reduce fuels ahead of the approaching fire front. Sprinkler systems were installed to protect the Stephen Foster State Park facilities and hand crews began raking around hundreds of trees inhabited by red cockaded woodpeckers. An open line on the fire was too hot for hand crews to begin containment activities.

SEPTEMBER 5: In addition to the woodpecker habitat private residences and commercial tourists enterprise were threatened by the stubborn fire. A Type II incident commander and other interagency overhead were ordered.

SEPTEMBER 6: An interagency team led by Joe King of Cherokee National Forest was assembled to command the Short's Fire.

SEPTEMBER 8: All of the area between Georgia Highway

117 and the main fire had been burned out and the east side of "the pocket" had been black lined between the highway and the swamp's edge. Retardant drops began on the east flank of the fire to protect Stephen C. Foster State Park. Helicopter bucket drops began reinforcing the retardant line. Hand crews began mop-up on the upland flanks of the fire but the swamp flanks were still too active for direct attack. The fire area had increased to 2,500 acres. Resources on the fire at this point included 29 tractor-plow units, seven engines, a water tender (9,000 gal.), one retardant aircraft, six helicopters and 170 personnel.



SEPTEMBER 9 - 16: The mop-up on burned out areas continued. Hand crews began containment along the south flank in the swamp. The fire area had been stabilized at 2,600 acres. Seventy percent of the line had been contained by black lines, retardant lines, sprinkler systems, or helicopter/bucket wet lines. Within the 2,600-acre containment zone, fuels were low scrub-shrub, some of which were burned twice in the past five years. It was possible to work on the fire in the swamp and there was a reasonable chance of containing the fire until suppression action peaked during this phase of the fire at 20 tractor-plow units, eight engines, one engine tender, five helicopters, two retardant planes, and 253 personnel. The overhead team began demobilizing personnel and equipment and by September 17 had turned the fire back over to refuge personnel, leaving only the refuge staff, one 20-person crew, three helicopters and air support personnel.

SEPTEMBER 18 - 19: Refuge personnel were faced with the task of holding the fire perimeter around a 2,600-acre fire, mostly within the swamp, with over 200 acres of burned peat in one area. Fire activity immediately began picking up. Several spots were suppressed around the

By the ninth day of the fire, six helicopters were on the scene. This one is making a water drop to reinforce a retardant line established by an air tanker.



Firemen from several counties used hose to assist forest firefighters who battled the blaze with plow units and pilots who fought the widespread fire from the sky.



A tanker releases retardant as it makes a pass over the burning forest.

perimeter of the fire. All available resources were committed toward reinforcing lines in anticipation of a cold front scheduled to pass with the next few days. Additional resources were ordered.

SEPTEMBER 20: As fire behavior conditions worsened in anticipation of the passage of a strong cold front, an interagency short team was ordered.

SEPTEMBER 21: The Virginia Team, led by John Coleman of the Washington National Forest, assumed command of the fire.

SEPTEMBER 23: The long expected cold front passed through with winds of 10 to 15 miles per hour and relative humidities in the 20's. Lines held throughout the day, but just before dark, gusty winds blew flaming Spanish moss over the southeast corner of the swamp perimeter line. Attempts to suppress the escaped fire with helicopters before dark failed. North winds continued to expand the escaped fire area throughout the night. The fire spread into swamp forest areas with heavier fuels. At this point, all suppression action within the swamp was curtailed and attention was now concentrated on protecting property or resources on upland areas around the swamp, except where it was necessary to drop water or retardant in the swamp to cool off or slow down a run or front advancing toward suppression crews on the upland. The fire area increased rapidly over the next few days.

SEPTEMBER 26: The fire had now grown to 10,500 acres. Suppression action involved plowing lines between the swamp edge and the nearest major break (usually the perimeter Road), burning out between the breaks, then suppressing any spots escaping the burn-out zone when the main fire made its runs toward the swamp's edge. Steady winds from the east aided suppression efforts tremendously, allowing suppression crews to confine the

(continued on page 18)

It takes a lot of interagency teamwork to subdue a major forest fire. It requires well trained personnel, modern equipment, dependable communications and effective strategy.

*Alan Dozier
Associate Chief, Forest Protection
Georgia Forestry Commission*

THE COMPOSITION OF HEARTWOOD

As trees reach maturity, they begin to develop heartwood in the center of the stem, major limbs and roots. Heartwood is composed of cells no longer involved in the life processes of the plant, and its primary function is to provide strength and stiffness to the tree.

In some species, such as black walnut, heartwood is easily seen because of its darker color. In other species, such as baldcypress, Southern yellow pine, and chestnut, the heartwood also can exhibit varying degrees of resistance to decay. In species that may exhibit decay resistance, wood from very old and slowly grown trees seems more likely to possess this characteristic.

Between the heartwood and bark is a shell of living tissue called sapwood, which varies in width with individual trees and different tree species. Sapwood cells in the living tree are alive, and much of the younger

timber being grown for commercial use today is almost all sapwood.

Sapwood products of all species will rot if placed in a moist, warm environment that encourages the growth of decay organisms. The sapwood of Southern yellow pine will accept preservative pressure treatment very well, and therefore it is the species most favored for this use in construction nationwide.

As heart timber from decay resistant species is generally unavailable in commercial quantities today, preservative treated wood is used instead in situations where decay may be a problem. For most uses, this is the logical and practical choice, as available heart timber may be both expensive and variable in decay resistance.

Species which may have heartwood of moderate decay resistance in Georgia include: Douglas fir and larch in softwood and honey locust in hardwoods.

UNPAINTED HEARTPINE HOUSE STILL SOUND AFTER WEATHERING 91 YEARS

Passing through Jewel, Ga. is like traveling through a time warp that has left this small community virtually untouched for almost a century. J. C. Raley's ominous looking heartpine house - complete with gables and the appearance of being haunted - enhances the nostalgic impression.

Jewel, population approximately 75, is located on a strip of Highway 16 running east and west from Sparta to Warrenton, where the Ogeechee River separates the counties of Warren and Hancock. The Raley heartpine home is on the east end of a strip of housing fringing both sides of the road. It is next to impossible to pass this house without noticing it.

"The house draws a lot of attention," said the owner, 76-year-old J. C. Raley. "Always has." Raley, who has lived in the house since 1950, raised a family there. His two sons live nearby. Raley and his wife Inez still live there and remain unimpressed by curious travelers who stop to take pictures and inquire to what degree the house is haunted.

"I guess we've had people from every

state in the Union stop by and take pictures." Raley said. "I just tell them to go ahead and I then go on about my business."

Raley said there is one lady from Macon who stops frequently when enroute to Augusta and always gets around to saying, "this house has just got to be haunted."

What may be misinterpreted for haunted could be an atmosphere of sturdy calm. Even Raley's 13-year-old dachshund, C. C. (named for Charlie Chaplin) seems as relaxed as the town of Jewel.

The Raley house is unusual in a number of ways. Raley has never painted the house because he says it looks better in its natural state. Indeed, to a wood purist,

painting this monument of heartpine would be a terrible transgression. Built in 1900, Raley remembers that his father told him of hauling in the heartpine via a two-horse wagon from surrounding forests.

A carpenter by trade, Raley bought the house in 1950. He is reluctant to say what he paid for it, but emphasizes that he "didn't pay as much as they were asking."

The inside of the Raley house is just as impressive as the outside. The cavernous rooms, with high ceilings and pictures from the turn of the century looking

Mr. and Mrs. Raley stand in front of their picturesque home.

own from the walls, reflect a peaceful quality. Stained glass windows refract morning sunlight on an intricately designed staircase. The mantle, also heartpine, is a masterpiece of woodwork that has prompted many offers of purchase; but like the rest of the house, it remains intact.

"I guess the only part that's not heartpine is the backsteps," Raley said. He replaced the originals with treated pine to alter the steep 13-step climb to the backdoor. The redesigned steps do not detract from the personality of the house. Even C. C. seems to like them; sleeping under the steps in a basket is one of the dachshund's favorite pastimes.

Actually, Jewel is old cotton country, once bustling with agricultural activities. But Raley remembers that when the cotton mill burned in 1927, commerce began to go downhill. To make matters worse, the cotton gin then fell into

disrepair and the bustling ground to a halt.

Now retired, Raley has spent his entire life in the Jewel area. As a boy he began learning the carpentry trade by covering houses with wooden shingles. During all this time, Jewel and Raley's heartpine house endured in their original state as a reminder of times past. The community and the land reflect basic values. Sixty-four of Jewel's 75 residents belong to the Jewel Baptist Church.

Some people think it's just a matter of time until Georgia's growing movie industry discovers the Raley house for a good old fashioned horror movie. "I wouldn't have any objections to something like that," Raley said, "if we could work out the terms."

But so far, Jewel and the Raley house remain relatively obscure. "We are off the beaten path and we're small," said Raley sitting on the backsteps of the house. "Everybody here knows everybody else, and we're not really close to other towns."

He paused and looked out at the pine woods in the distance. "But all things considered, I think we're blessed," he said.



TO BURN OR NOT TO BURN

H. L. STODDARD SAYS BURN!

By Bill Edwards

Some people might say H. L. Stoddard, Jr. has a serious case of Smokophobia (fear of Smokey Bear).

"Smokey Bear is the most dangerous mammal ever to walk the North American continent," proclaims Stoddard looking out over the pine forests of his 1,000 - acre Sherwood Plantation near Thomasville. Stoddard's dislike for Smokey dates back many years to what he calls "a propaganda campaign that labeled all fire as bad and inadvertently instilled harmful concepts that we've been paying for ever since."

"Smokey was a carefully calculated and effective propaganda tool," Stoddard said. "He was personalized, humanized and well liked by the American public. Worst of all, he was believed, and the second most recognizable figure in the world. The first was Santa Claus."

Stoddard pauses, picks up a pine cone and examines it. "Smokey's creators had the best of intentions," he continues, "however, results have been disastrous fires that could have been prevented through intelligent burning programs. But it's hard to run wide open in one direction for so many years, then turn around and convince people in the opposite direction."

Stoddard's ideas are regarded by many as radical, but he calls them progressive and offers evidence and experience to support them. His premise is simple: In fire dependent ecosystems, only bad management allows extreme accumulation of hazardous fuel; fire should be constructively used on such ecosystems and regulated as nearly as possible to imitate nature's use of fire to cause oxidation. In non-fire dependent ecosystems, natural decay replaces fire as a catalyst for oxidation.

"Fire's rapid oxidation," Stoddard said. "Decay is slow oxidation. Fire dependent ecosystems need fire - and Southern yellow pine species are

definitely fire evolved, fire adjusted, and fire dependent." Stoddard says growing Southern yellow pine efficiently demands frequent and correct use of fire.

EVOLUTION BY FIRE

Stoddard can become eloquent when talking about fire. "Earth was born in fire," he said. "As life evolved, the most adaptable forms of vegetation and animals formed a bond with fire to reap oxidation benefits. In America, our most magnificent forests existed in a sea of grass, which offered combustibility for recycling and perpetuation of life."

He makes a sweeping gesture to the tall pines surrounding him, "In my opinion, you cannot burn these pine forests too often," Stoddard said, "simply because nature will prevent it by lack of fuel. When fire is completely removed from this environment, forces are set in motion that will



Stoddard in the midst of his well managed forest.

destroy pines in time, mainly through being replaced with hardwoods. Not to mention that allowing excess fuel to accumulate can result in burning the forest to worthless crisp."

Stoddard believes that fire, under natural conditions, was much more frequent among pine species than we have been led to believe. He contends that the research, based on an already altered environment, is basically flawed.

The Thomasville timber grower can go on for hours with detailed and scientific debate on the benefits of controlled burning. He has been in almost every state in the U. S. gathering evidence to support "controlled burning" theories. He dislikes the term "prescribed burning" because he says "it sounds like a doctor who might know what he's doing."

"I do not consider myself an official forester, ecology analyst, botanist environmentalist, or anything else in an official capacity," Stoddard said "I do consider myself a capable observer and I draw conclusions on that basis."

Stoddard's modest evaluation of himself contrasts with an authority he reflects when discussing his theories. Could he be right and traditional theories be wrong? If Stoddard is an authority on prescribed (or controlled) burning, how did he reach this status?

A LIFETIME WITH NATURE

Stoddard's father moved the family from Wisconsin to Thomasville in 1924. They settled on the same 1,000 acres that Stoddard lives on today. Young Stoddard was five years old at the time. His father, a self-taught ornithologist who had been a taxidermist for the Milwaukee Museum spent the rest of his life studying quail which led to a variety of forestry consultant duties for Thomasville's numerous plantations. The senior Stoddard wrote a 559 page book titled

The Bobwhite Quail: Its Habits, Preservation and Increase", published by Scribner's in 1931. Although now out of print, the book is still used by colleges and universities and considered by some to be the most definitive book on Bobwhite quail ever written. Columnist Ralph McGill described the book in a 1957 Atlanta Constitution column. Stoddard was later awarded the Brewster Medal for his book, the highest honor conferred by the American Ornithologist's Union.

So young Stoddard grew up in close rapport with nature. Birds, animals, and pine forests of the vast Thomasville estates became his constant companions. Controlled burns, although not defined as such, were common in those days because people who had lived close to the land had a different perspective of fire. Young Stoddard often accompanied his father when burns were implemented, timber tracts evaluated, and quail studies made.

Stoddard filed all these things away for future reference, but one incident in particular stands out in his memory.

BUZZARD STUDY

When Stoddard was eight years old, he accompanied his father on a series of buzzard study excursions. At the time, virtually no studies of buzzard habits had been done. The elder Stoddard fashioned a wire trap (20 feet long and 4 feet high) to catch buzzards for banding. Later, their migrations would be traced by recapturing them.

The trap was placed deep in an undisturbed section of pine forest. A killed mule or cow carcass was placed inside for bait. The next day, Stoddard and his father would return to find buzzards trapped inside having lunch. Stoddard's father would crawl inside the trap and band the buzzards.

Buzzards do not like to be disturbed when they are having lunch, and Stoddard remembers their reactions very well.

"A buzzard can regurgitate with a good deal of force and accuracy up to four or five feet," Stoddard remembers, "and while Pav was crawling around in there banding them, fifty buzzards would be scrambling around to take aim at him. I have to admit, he had a stronger stomach than I do. I had to get upwind."

On a list of undesirable substances, a buzzard vomit would maintain high priority. It may have been subcon-

scious reaction to this childhood experience that turned young Stoddard's primary interest from ornithology to forestry.

FORMAL EDUCATION

Sustaining an interest in forestry, Stoddard learned as much as he could from his father and surrounding plantation owners. When he enrolled at the University of Georgia, he majored in zoology, feeling that a formal study of forestry would duplicate much knowledge he had already acquired. But he always made the connections of forestry, zoology, geology and the schemes of nature that interrelated.

"That's when I really began to consider nature's role for fire," Stoddard said. "It was obvious that it had been a factor in preserving nature's balance and harmony for thousands of years before human beings even thought about it. It relates to everything in a fire dependent ecosystem."

Going all the way back to the buzzard banding experience with his father, Stoddard even relates the decline of buzzard populations in pine forests to lack of burning in a fire dependent ecosystem.

"I believe the heavy undergrowth makes it difficult for them to find carrion in pine woods," Stoddard said. "There's always been a lot of debate on whether buzzards locate food by sight or smell."

RARE RESEARCH

One of the major influences on Stoddard's study of fire was his involvement with the nearby Tall Timbers Research station in Tallahassee, Florida. A close friend of the organization's founder, Stoddard's father was active in establishing the facility and served as president of the organization for several years. Tall Timbers has been serving the public for 30 years by protecting wildlands.

"It also has the largest collection in the Southeast on fire statistics relating to woodlands," Stoddard said. "This may be the largest collection of such data in the world, but I'm not sure about that."

Stoddard does not serve in any official capacity with Tall Timbers, but maintains contact with the organization and its expanding activities.

"Tall Timbers has data proving what is so hard for many people to believe," Stoddard said, "that fire is a necessary and beneficial tool of nature. It also provides a place for people from all

over the world to come and compare notes on the constructive use of fire; and that sort of place is hard to come by with all the misunderstanding instilled by years of misguided propaganda."

It is Stoddard's inflexible contention that society had better learn more about the proper application of fire and other aspects of harmonizing with nature "because our natural environment is shrinking and management techniques must blend with the patterns of nature, rather than resisting and distorting them."

Stoddard said the U. S. Forest Service in some Western states has increased controlled burning programs by 25 percent in an effort to curb the annual fires that rage in some forested sections. He also said burning practices on Indian reservations have produced excellent results because reservation restrictions are less stringent.

"Native Americans know how to maintain the land and forests in harmony with nature," Stoddard said. "They always have."

When people ask Stoddard what makes him an expert, he generally does not refer to textbooks or statistics. His initial response is to show them the picturesque stands of pines on his 1,000 acres of Sherwood Plantation forests abounding with game and other wildlife, but almost devoid of such nuisance as Lyme-disease carrying ticks. This supports Stoddard's belief that fire properly used "sanitizes" the forest.

"I've had the opportunity to burn on the same 1,000 acres of pine forests for 64 years," he says. "I burn loblolly stands on an annual basis and they look better every year. I know it works. And I know that when you exclude the carburetor that runs a fire dependent system, you open the door for something else to take its place."

Stoddard sees many forestry personnel of the future serving as "burning technicians" in ecosystems that need their services. He envisions these forest custodians as highly trained and dedicated to the maintenance and balance of nature.

"It is inevitable that if we survive as a species, we are going to have to begin to imitate nature in many ways; fire is just one of them," Stoddard says. "Some sources say the world's population will double in 40 years. If that happens, it doesn't take an environmentalist to figure out that some changes are going to have to be made."

DIARY OF A MAJOR FIRE

(continued from page 13)

fire to the southwest part of the swamp by working the fire along the swamp's edge as the fire area enlarged to the south. Any time during the active phase of the Short's Fire, strong winds from any other direction could, in two days time, move the fire to any part of the swamp's edge, making defense of private property almost impossible. Although the east flank of the fire held during the escape and did not grow during the remainder of the suppression effort, a major concern was that the black line would be outflanked by the active head growing to the south. A south wind could once again endanger Stephen Foster State Park. In addition to protecting private lands and resources around the perimeter of the swamp, fire proofing activities continued around all west side refuge and state park facilities, refuge facilities at Camp Cornelia, and Chesser Island. Hand crews raked all red-cockaded woodpecker cavity trees within threatened areas. Suppression costs were now approaching \$200,000 per day.

OCTOBER 2: Transition occurred from the Type II Virginia Team to the Type I Southern Interagency Red Team led by Robert Kitchens from the Southeastern Regional Office of the USFS. The Short's Fire area continued to grow daily. Preparations were made for the expected burn out of the southern half of the Okefenokee Swamp. Several helicopter dip sites were constructed near the perimeter of the swamp.

OCTOBER 9: The Short's Fire had burned 20,773 acres of swamp and forestland. Resources committed to the suppression action were 46 tractor-plow units, 16 engines, six engine tenders, six helicopters, three retardant aircraft, and 629 personnel. During this period, other natural forces were at work. The progress of tropical storm Klaus had been monitored for several days. Although the storm began to disorganize as it approached the area, it still had four inches of rain to drop over the Short's Fire. Tropical storm Marcos followed, dropping another two and a half inches of rain. Water levels in the swamp increased 12 to 18 inches.

OCTOBER 10: Demobilization began on this date.

OCTOBER 14: Plans were made to replace the Type I Red Team with the Type I Blue Team led by Rex Mann of the Daniel Boone National Forest to continue mop-up and fireline rehabilitation operations. Mop-up continued for several weeks as hot spots kept showing up. Rehabilitation of firelines, roads and camp sites, bank sloping and weeding of helicopter dip sites, repairing damaged culverts, etc. continued throughout the remainder of the year.

OCTOBER 28: The last of the team left. The Short's Fire was turned back over to the refuge. Much of the remaining mop-up in the swamp was accomplished by a helicopter rappelling team from Arizona.

Personnel and equipment from the following agencies were used to suppress the Short's Fire: Georgia Forestry Commission, U. S. Fish and Wildlife Service, U. S. Forest Service, National Park Service, Bureau of Land Management, Bureau of Indian Affairs, National Weather Service, Department of Defense, Federal Emergency Management Authority, Florida Division of Forestry, Texas Forest Service, North Carolina Division of Forestry, Charlton County, Ware County, Brantley County, Clinch County, Jefferson Smurffit/Container Corp., Champion International, The Langdale Company, and Gilman Paper Company. During most of the suppression operation, the unified command concept was utilized where the interagency team and the Georgia Forestry Commission and sometimes the Florida Division of Forestry were in joint command.





A short course, **Negotiating Skills Foresters**, will be held at The University of Georgia's Center for Continuing Education on January 23, 24, and 25. This one and one-half day course will introduce the principals of successful negotiations, discuss the traits of good negotiators and carefully examine the negotiating process.

Class exercises will be conducted throughout the course to develop participants' negotiating skills. The course is designed for procurement, service and consulting foresters and others who are responsible for buying or selling forestry services or products.

The instructor is James E. "Jim" Mescher, president of Jim Doescher Associates, and a consulting forester with Natural Resources Planning Services, Inc. in Panama City, Florida. He is also a visiting lecturer at the Auburn University School of Forestry.

Other forestry related courses offered during the first quarter of the year include: Negotiating Skills for Foresters, Jan. 23-24; Desktop Mapping with Remotely Sensed Data, Feb. 14-15; Timber Income Tax, Feb. 24-28; and Natural Regeneration of Southern Pine, Mar. 2-4.

For more information, contact Dr. Richard C. Field, Georgia Center for Continuing Education, The University of Georgia, Athens, Georgia 30602 or (404) 542-3063.

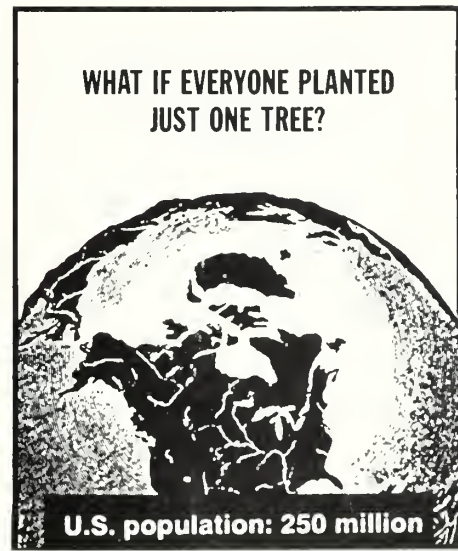
GEORGIA'S NF SHARE ANNOUNCED BY FEDS

Georgia will receive approximately \$916,500 as its share of national forest receipts collected in fiscal year 1991, according to the U. S. Forest Service.

By law, the Forest Service pays 25 percent of the revenues it collects from timber sales, grazing, recreation, minerals, and land uses to states in which national forest lands are located. The funds are used for schools and roads.

Forty-one states and Puerto Rico will share in payments totaling more than \$304 million.

The largest payment will go to Oregon, approximately \$136,736,700, and the smallest amount will be paid to North Dakota, \$64.75.



LOOKING BACK



45 YEARS AGO

Another seven counties joined Georgia's expanding forest fire control program by signing an agreement to establish protection units. Negotiations are underway to interest other counties to join the 13 now in the system...Twenty forestry educators, from states as far away as Maine and California, visited Georgia to inspect its woodlands and forest industries...One of the new forest lookout towers was erected recently in Haralson County...One of the largest sawmills to be built in North Georgia in many years is now in full operation near Ellijay...

25 YEARS AGO

The first national "natural" landmark was dedicated in Floyd County. The Marshall Forest near Rome became one of 14 natural landmarks in the United States. Located at the base of Horseleg Mountain, the forest is used by Shorter College and other area schools as a laboratory...386 forest firefighters from the Commission, industry and federal agencies participated in a massive drill to help train personnel for the "real thing"... More than \$200 million went into construction of wood-using industries in Georgia in 1966. Companies building new plants included U. S. Plywood Corporation, Allied Timber, Ace Post and Georgia-Pacific ... May 1 marked the 25th anniversary of the nationwide Tree Farm Program. Georgia observances included special programs recognizing the first tree farmers in the state to participate in the movement...

COMMISSION RECEIVES SAF AWARD

The Georgia Forestry Commission has received the 1991 Society of American Foresters (SAF) Employer Recognition Award.

Presented for the first time this year, the award recognizes employers who have given outstanding support to their employees' professional development. John W. Mixon, director, accepted the award on behalf of the Commission.

To win the award, the Commission met a strict set of criteria, including strong support for foresters to participate in SAF continuing education and other professional activities.

"Employers of members are extremely important to SAF participation. Their support makes it possible for members to attend meetings, serve on committees, and conduct the affairs of the Society," William H. Banzhaf, SAF executive vice president, explained, "Such support is to the benefit of not only employees, but also to employers, the forestry profession, and the community at large."

The Society of American Foresters is the national scientific and educational organization representing all segments of the forestry profession in the United States.



Senior Forester Dale Higdon (left) and Patrolman Terry Trammell, of the Gwinnett County Commission Unit, examine row of ornamental pear trees for disease. The trees are typical of the thousands planted in the Atlanta area that have contributed to Atlanta's national image as a "City in a Forest."

URBAN FORESTRY EMERGING WITH VITAL NEW INFLUENCE

... But Progress Brings Now Challenges

Larry Morris, Commission District Forester for Atlanta and surrounding urban areas, remembers when urban forestry was considered by some to be a trivial fringe benefit - something nice to have, but maybe not necessary.

All that is changing now, as urban forestry programs move to the forefront of public awareness and increasing federal funds are provided to urban forestry projects. Motivation for funding is based not only on alleviation of environmental crisis factors, but also on little publicized sociological benefits.

"It may surprise a lot of people when they learn just how vital, versatile and influential urban forests are," said Morris, who has been active in Atlanta's urban forestry activities in the



MORRIS

past 13 years. "From an environmental perspective, trees can have a tremendous beneficial affect on clean air quality, temperature, erosion, humidity, wildlife habitat, noise level control, and

atmospheric carbon levels."

Morris also pointed out that an increasing number of studies are revealing sociological benefits of trees in an urban atmosphere. For instance, studies show that hospital patients having windows facing trees heal faster and require fewer pain killers. Also trees absorb noise, especially high frequency sounds that are stressful to humans.

However, one of the most basic benefits of urban trees is removal of particulate matter and conversion of carbon dioxide to oxygen. This means cleaner air and healthier people who breathe the air. One acre of mature trees creates enough oxygen for 18 people.

"Finally, the necessity and urgency to meet urban forestry needs is being recognized," Morris said. "In the seven county area served by our district, we're busier than we have ever been in all the years since I've been here. President Bush recognized the environmental significance of urban forestry and is supporting national programs like America The Beautiful and Global ReLeaf."

So things are better. There is more

public awareness and support for urban forestry. Funding is available for programs even in this time of severe economic recession.

But with new attention comes closer scrutiny, some of which veteran urban forester Larry Morris considers to be questionable.

QUESTIONABLE SURVEY

Although Atlanta is popularly known as a "City in a Forest", a recent national survey gave Atlanta low ranking among major cities for the number of trees shading its streets. The survey blames Atlanta's rapid development and declining forestry budget for the situation; cutting of urban forests for development is a major concern.

Morris agrees that Atlanta has serious urban forestry problems, but based on his 13 years experience, he takes exception to the survey's low ranking of Atlanta. "I would call this survey an incomplete evaluation conducted with techniques that are not comprehensive," Morris said. "We have just received a grant from the ATB (America The Beautiful) program to help Atlanta conduct a comprehensive street survey. The

results of this survey will determine how accurate the previous evaluation was."

Meanwhile, another report by the American Forestry Association (AFA) stated that "over twice as many trees are removed than are planted in Atlanta." Morris points out, however, that the national average for urban tree removal is four removals for every one planting.

Marcia Bansley, head of Trees Atlanta, a private organization that promotes planting and maintenance of urban trees, said Atlanta is losing an average of nearly 30 acres of trees a day for construction of housing, shopping centers, highways and other developments. Morris said a continuous effort to curb this type of tree loss is underway - but more public awareness and support are needed.

OLYMPIC IMAGE

Atlanta's "City in a Forest" image has become even more important with the 1996 Olympics. Mayor Maynard Jackson has appointed a special committee to examine Atlanta's tree needs. A report from the group is expected early next year.

Commission Director John Mixon, who directed the nation's first urban forestry program established in Atlanta in the mid 60s', is chairman of the Georgia Trees Coalition formed in conjunction with immediate urban forestry needs. A major objective of the Coalition is to plant trees in Atlanta and other Georgia Cities to beautify the state for the coming Olympics.

During a two month period, Commission personnel supervised the planting of 16,000 trees in the Atlanta area under the auspices of the Coalition. Members of the Coalition include: City of Atlanta, Fulton County, Marta, DeKalb County Commission, Trees Atlanta, Atlanta Park Pride, Georgia Department of Corrections, and Georgia Department of Transportation.

Looming large over Atlanta's growing concern over urban forestry needs is the estimate based on a nationally used formula that says the average city street in America could support 200 street trees per mile between sidewalk and curb. Based on this formula and an estimated 75,000 existing street trees, Atlanta has pace for nearly a half million more trees.

MORRIS NOT SURPRISED

From his Commission office in Stone Mountain, where the urban forestry needs of seven surrounding counties

converge, Larry Morris is not surprised at the current surge of civic interest over trees. Morris, like other urban-forestry-oriented individuals and organizations, has been repeating statements of need for years.

"The need for an urban forestry renaissance in Atlanta is not new," Morris said. "It's just that the facts have now been accelerated into the public arena by environmental concerns and the scheduled 1996 Olympics. Actually, there are similar situations in urban areas - large and small - all over the United States."

Morris favors long range programs that will harmonize nature with urban progress - rather than a quick fix approach instituted by the sudden rush of public concern.

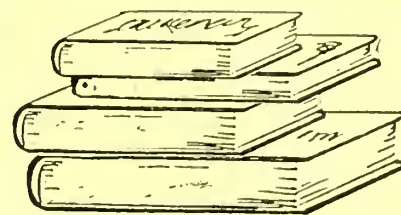
"The growing of a tree is a slow process," Morris said, "and the maintenance of urban trees is more concentrated simply because urban trees are subject to so much stress. So the basic consideration should be planning. Consider how long a replanted tree requires to grow - and consider the consequences before cutting urban forests."

Morris said urban ordinances are necessary to instill these values. Commission personnel from his district have assisted with the adoption of numerous tree ordinance programs. Those assisted by the Commission in adopting ordinances include: Cobb County, City of Atlanta, Acworth, Marietta, Clayton County, and Gwinnett County.

EDUCATIONAL SERIES

Commission urban forestry personnel also provide an ongoing series of educational programs for school children, and 24-hour fire protection for wooded areas of seven urban counties. They also serve as technical advisors of regional and national promotional campaigns for urban forestry. One of the most important of these programs is Project Learning Tree, a national effort involving facilitatory workshops designed to educate teachers on forestry. The teachers in turn educate students.

"Urban forestry has come a long way since it was established and basically just worked shade tree cases - although this was and is still very important because of the influence on clean air," Morris said. "We're getting more and more involved in things that we've never been involved with before. Hopefully, this surge of public concern will serve as a catalyst to provide the public support and funding to do what is needed in Atlanta. The know-how is already here. We have it in this office."



THE BOOK CORNER

THE SOUTHERN FOREST, A chronicle, by Laurence C. Walker. University of Texas Press, Box 7819, Austin, TX. \$29.95 plus \$2.00 postage.

When the first European explorers reached the southern shores of North America in the early seventeenth century, they faced a solid forest that stretched all the way from the Atlantic coast to eastern Texas and Oklahoma. The ways in which they and their descendants used—and abused—the forest over the next nearly four hundred years form the subject of *The Southern Forest*.

In chapters on the explorers, pioneers, lumbermen, boat builders, and foresters, Laurence Walker chronicles the constant demands that people have made on forest resources in the South.

With the advent of professional forestry in the twentieth century, however, the southern forest has made a comeback. A professional forester himself, Walker speaks from experience of the difficulties that foresters face in balancing competing interests in the forest and offers predictions for the forest's future.



DISTRICT FORESTER WALL ENDS LONG GFC CAREER

Forester Rowe Wall had his degree from the University of Georgia back in 1959 and was eager to get his career underway when the Forestry Commission assigned him to the Randolph County Unit to become the county's first forest ranger.

He was named assistant district forester in fire control, Americus District, a short time later and in September of this year he retired as district forester in that 17-county district, the largest in the state.

HEADED THREE DISTRICTS

But Rowe Wall didn't spend all his career in the Americus District. After a decade in the fire control assignment, he was named district forester of the Newnan District, and in 1972, he transferred to Columbus to head a district that existed at that time. In 1980, it was back to Americus, where the veteran forester served his last 11 years.

Wall, a native of Bainbridge, graduated from high school in Decatur County and went on to Abraham Baldwin Agricultural College for two years before entering the School of Forest Resources, University of Georgia.

The retired forester and his wife, Jeffie, continue to make their home in Americus, where they are active in the First Baptist Church. Wall served in the U. S. Army Reserve for several years and was active in the Kiwanis Club in prior years.

FLINT DEVELOPMENT

Wall said one of the major developments in his district in recent years was the Flint River Nursery, the Commission's modern seedling growing and packing facility in Dooly County. Personnel throughout his district have been involved in the success of the large nursery.

The forester and his wife, who teaches school in Americus, have two sons and a daughter. Jeff, an ensign in the Navy, is a graduate of the U. S. Naval Academy. Chris is a sophomore at Georgia Southwestern College and Paul is a senior at Americus High School.

What will Wall do now that he is retired? He is presently "taking it easy" he said, but friends who know the

retired Commission employee realize that he will soon be into some kind of activity. They remember how energetic he has been for the past 32 years!



WALL



BUTTS

PAUL BUTTS, UTILIZATION SPECIALIST, RETIRES AFTER 33 YEARS OF SERVICE

Forester Paul Butts had his army discharge papers in his pocket and was headed South to resume his work with the Florida Forest Service when he suddenly decided to pay a courtesy call at the Georgia Forestry Commission state headquarters in Macon.

It turned out to be more than just a friendly visit. There was an opening for a project forester in the Commission's McRae District on that particular day and Butts was offered the position. He readily accepted it.

That was 33 years ago. Butts retired on the last day of November. He said he has witnessed tremendous Commission progress between those two dates.

The retired forester is being remembered mainly for the pioneering work he accomplished in wood utilization. After six years in the McRae office, he transferred to Macon to accept the newly created position of Forest Utilization and Marketing Specialist. It was part of a national program aimed at reducing waste in the manufacture of a broad range of wood products. He worked with forest industries around the state and also compiled and updated a comprehensive directory every third year on wood manufacturers, a publication widely used by

companies, chambers of commerce and individuals.

Prior to his employment with the Commission, the Oglethorpe County native had a tour of duty with the U. S. Army in treeless Iceland, assisted the post forester at Fort Rucker and worked for a short time for a pulp mill in Alabama.

During his many years of work in forest utilization, Butts said he saw the emergence of Southern pine plywood, strand board, flake board, particle board and many other innovative building materials that have now become commonplace.

Butts graduated from Oglethorpe County High School and earned a degree in forestry at the University of Georgia. He is married to the former Miss Mary Elizabeth Swain of Telfair County and they reside in Gray, where they are members of Gray United Methodist Church. They have a married daughter, Susan, who lives in Milledgeville.

The veteran forester was presented a plaque by David Westmoreland, Assistant to the Director, in recognition of his faithful service to the Commission and the forest industry. The presentation was made at the Commission's annual Thanksgiving Dinner.

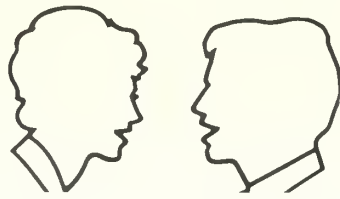
Paul Butts has served as an "unofficial historian" of the Forestry Commission for several years by collecting and preserving old documents, publications, artifacts and other materials pertaining to the state agency's past.

One of his interests has been the history of old Camp Wheeler, an infantry training center that stood on grounds now occupied by the Commission's state headquarters.

Macon and Bibb County residents supplied him with photographs of the camp as it appeared as a tent city during World War I and the barracks that occupied the land during World War II. He also obtained pictures, sketches and maps of the camp from the National Archives in Washington, D. C.

Butts, along with Forester Charles Place (retired), was instrumental in convincing the state to erect a historical marker at the site.

PEOPLE



IN THE NEWS

METRO FORESTRY PIONEER RETIRES

One of the five foresters who initiated the Commission's Metro Forestry Service almost a quarter of a century ago - a project that has grown into the widely acclaimed statewide Urban Forestry Program - has retired after a 35-year career.

Many who attended the recent retirement dinner in Gainesville honoring Crawford Cooper also remembered the other important assignments he ably handled through the years as the Commission evolved into one of the nation's leading forestry agencies.



COOPER

Cooper was born in Wilkes County and grew up in Athens. He worked as a tree trimmer after graduation from high school, served four years in the Air Force, attended Abraham Baldwin Agricultural College and later transferred to the University of Georgia, where he earned a degree in forestry.

His first assignment with the Commission was at the Dixon State Forest, later transferring to a forest technician post in Coffee County. He was a crew leader during a spraying operation during the state's devastating pine beetle epidemic in 1962 and was later transferred to Rome to become assistant district forester. He was assigned to lead the Resource Conservation Project in Gwinnett County three years later and in 1967 was called to Atlanta to help establish the Metro Forestry group.

Cooper went on to work as an area forester, a project forester in the old RC&D program in Gainesville, and a wood energy specialist in Blairsville during the nation's fossil fuel crisis. He returned to the Gainesville District in 1981 to serve the remainder of his career as a project forester.

The forester said he has "never been accused of rushing into anything" and fellow workers were not overly surprised when he married at age 52. "In forestry terms, I guess I was a 'deviation from the norm,'" he said. Cooper believes he is the only Commission employee to have become "a husband, father and grandfather all in a single day!"

J. L. STANFORD, district forest ranger of the Commission's Athens District, retired December 1 to mark the end of a 33-year career. The ranger, a native of Putnam County, came with the Commission in 1958 as assistant ranger in



STANFORD



BROWN

the Putnam Unit and became ranger of the Wilkinson County Unit two years later. He was named ranger of the Clarke-Oconee Unit in 1965 and assumed the position of district ranger in 1984. The retired ranger and his wife Joyce, have two sons, Kent of Putnam County and Donnie of Athens, and two grandchildren. Commission personnel and other friends honored Stanford with a retirement dinner in Athens on December 2 . . . JENNY BROWN, a senior at Washington Comprehensive High School, is the 1991 winner of the F&W Young Forester Award and Scholarship. The award is presented annually to a student for outstanding achievement in Georgia 4-H forestry activities. The 16-year-old recipient of the honor will receive a \$650 college scholarship. The winner is selected



SIMPSON

by a panel of judges from the University of Georgia's Cooperative Extension Service...RANGER JIM SIMPSON OF THE Camden County Unit ended an almost 30-year-old career with the Commission October 1 and many friends were on hand to honor him at a retirement supper. A graduate of Camden County High School, Simpson attended the Forest Rangers School at the University of Florida and worked for Union Camp

Corporation and Kings Bay Army Terminal before coming with the Commission in 1962. The retired ranger and his wife, Betty, have two sons, Walter, an engineer, and Tim, who is in communications. Simpson spent his entire career as ranger in his home county and was presented a plaque from the county for his outstanding service to landowners and others for almost three decades. Simpson said he will be busy in his woodworking shop and do a little gardening now that he is retired. □

WOOD TECHNOLOGIST

(continued from page 7)

curls he has created are "loose fill" and readily surround objects to be protected. He pointed out that loose fill is often automatically dispensed from great hoppers or chutes and must flow freely into the shipping containers.

Rice said there is one disappointing aspect in the curling process; experiments in the school's wood shop and laboratory proved that only green wood would produce the desired curl. Well seasoned wood makes tight spirals that lack the cushion effect of the curl.

Rice said scrap wood, including sawmill green trim, could be the source for a wood curl operation, but that represents a limited supply and it might be feasible, therefore, for timber to be purchased for the specific purpose of making the packing material. He said pine and yellow poplar seem to be the best species for curling.

Now that Dr. Jim Rice has painstakingly positioned the sharp knife blades on the whirling disc flaker for a curl of a uniformed thickness and found a way to introduce wood grain at a certain angle to make that happen, you might expect to find the box you open next Christmas packed with blond wood curls instead of foam peanuts, popcorn or old fashioned excelsior.

LET THIS BE THE YEAR!

If you've considered planting trees on some unproductive acreage on your place for several years, but have never quite gotten around to it, let 1992 be the year. Isn't it about time you joined thousands of landowners across the state who have converted idle land into productive forests?

Georgia has the ideal soil and climate conducive to the rapid growth of trees and as one of the nation's leaders in forest-related industries, you're not far from a good, steady market for your wood.

Contact a Georgia Forestry Commission forester or ranger in your area or call a private forestry consultant for information on buying, planting and protecting seedlings that will turn your marginal fields into healthy stands of pine.

Let this be the year.



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