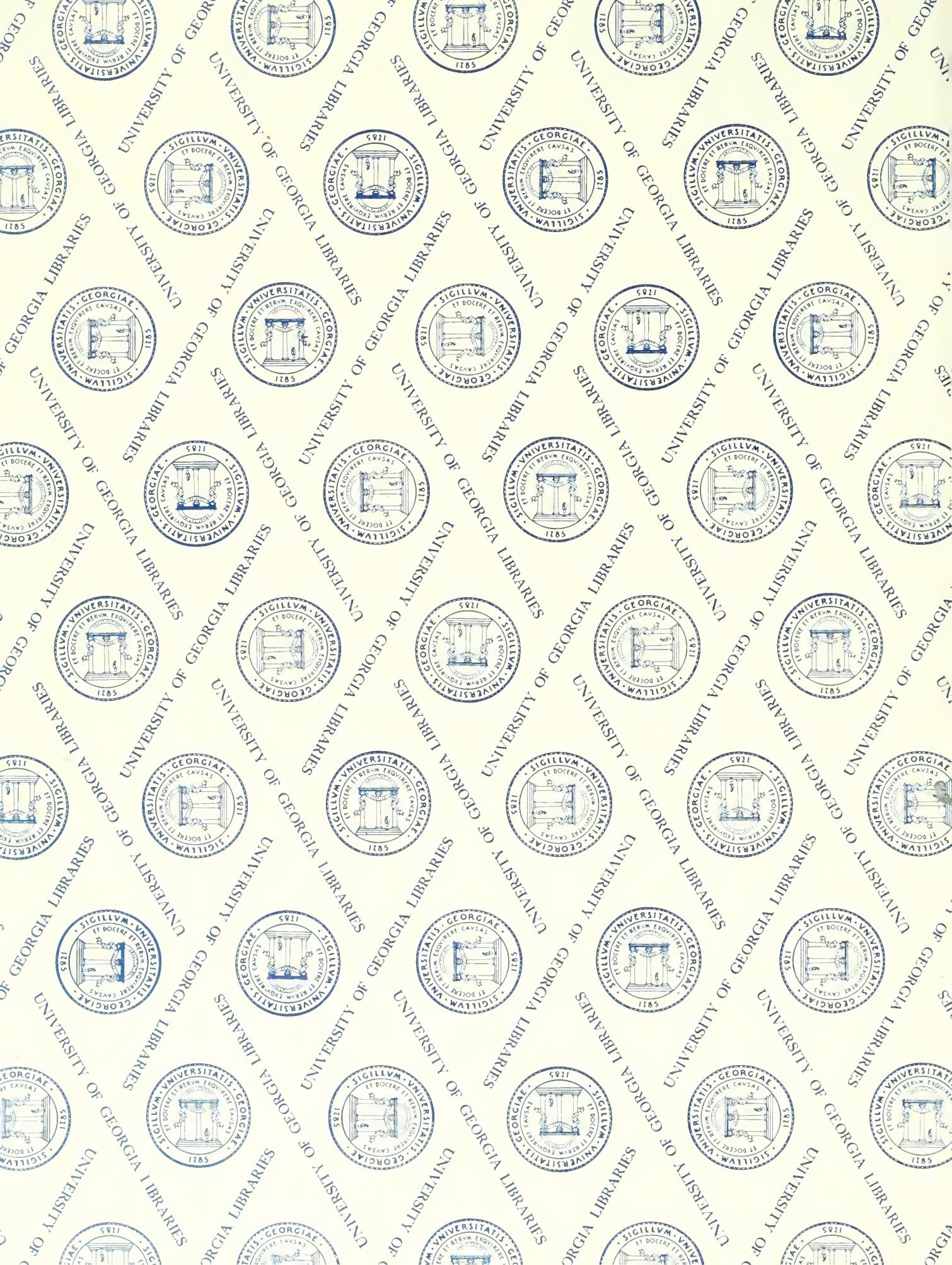
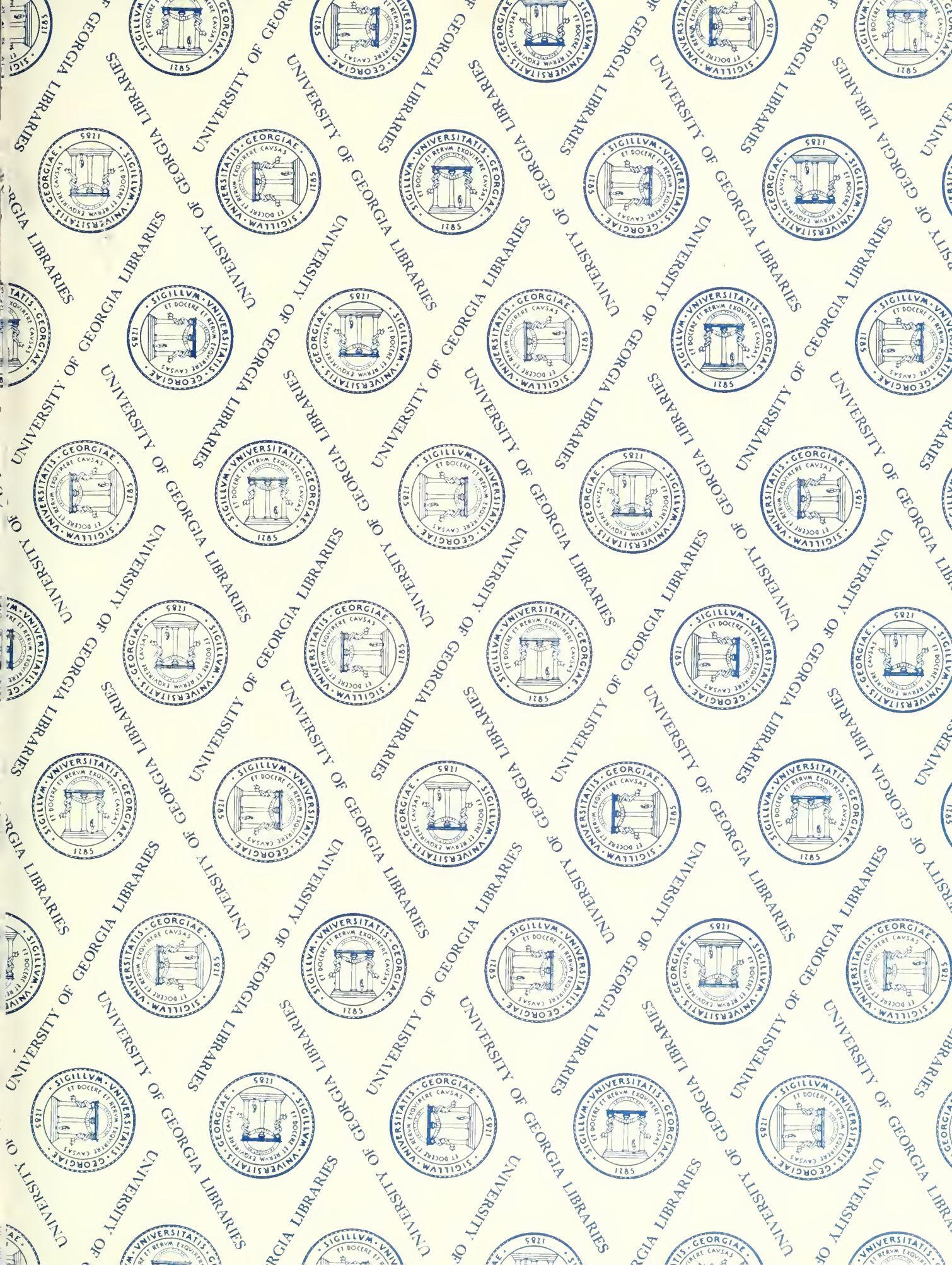


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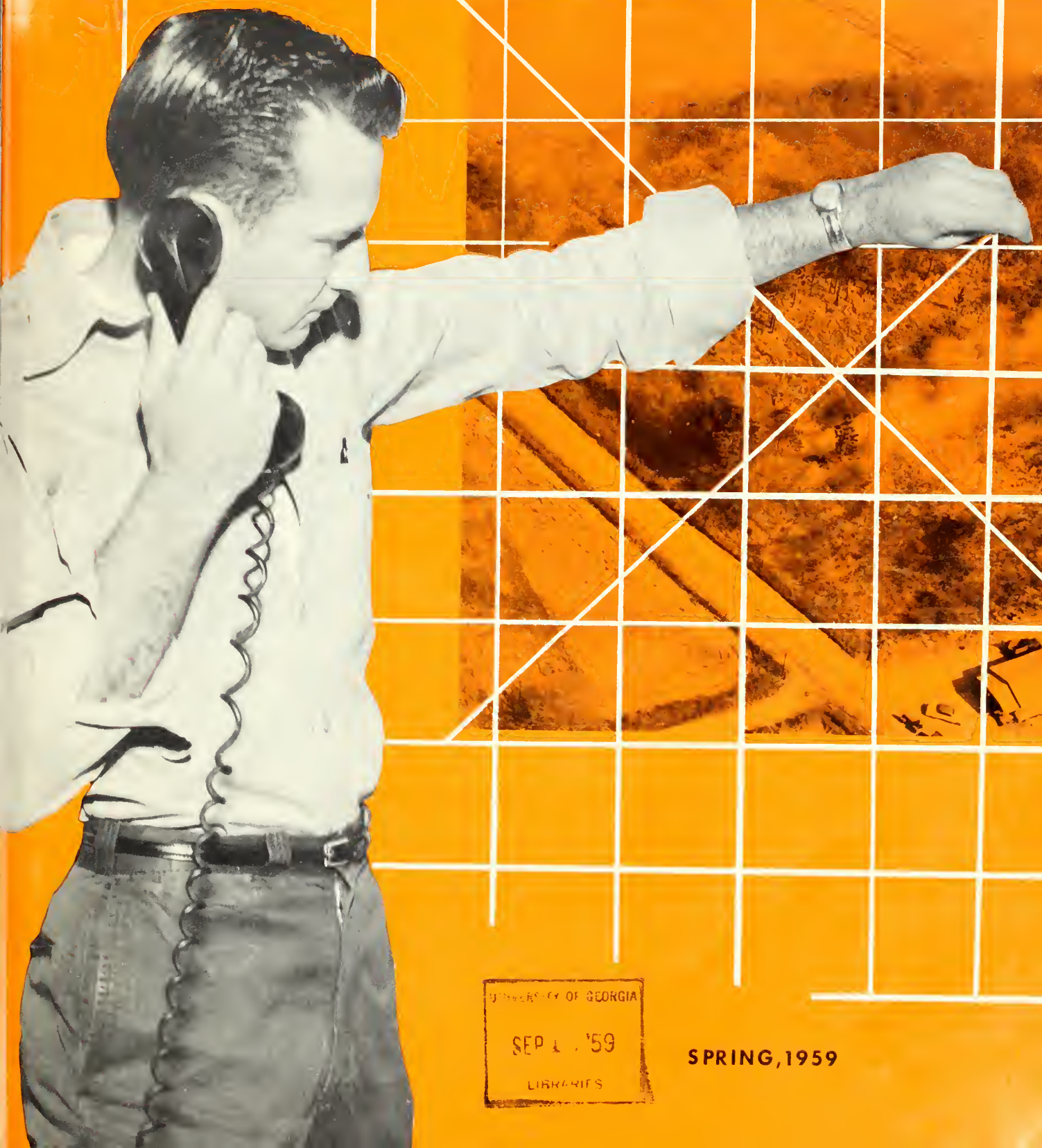
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FORESTRY



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Fastest-Growing Industry

(From the *Fitzgerald Leader-Enterprise*)

Ideal planting conditions following mid-winter rains have spurred Ben Hill county landowners toward a record-breaking set-out of pine seedlings, substantially more than a million scheduled for planting in the next several weeks.

This will virtually double last year's planting, and it is expected that the county's only previous "million" mark will be surpassed.

The new spurt in tree farming, due in part to the conservation reserve program of the Department of Agriculture, points up the key place pulpwood, naval stores and timber will have in the local economy in years to come.

Both of the county's tree planters are in full-time use, four or five of the larger landowners have obtained their own planters, and several have been rented from outside the county to take care of current planting needs.

Landowners large and small are participating in the program, and at least four entire farms are reported placed in the reserve for trees exclusively.

Good forest management and continued effectiveness of the fire control program will contribute to maximum profit from Ben Hill county's wooded acres.

Trees Should Be Treated As Other Crops

(From the *Adel News*)

The chairman of the Georgia Farm Committee recently stated that landowners should look on their trees just as other crops. He went on to say that trees are probably more like cotton than any other crop since more cotton is planted than is expected to grow to maturity and this is usually the case with trees.

The tree specialist stressed thinning the trees as fewer trees on a given acreage grow faster. The trees should be marked that are to be cut to see that the unmarked trees are not harvested. In picking the trees to be left it is thought those of good form with at least 30 to 40 percent of the total height in foliage should be saved.

Trees do need room, sunlight and moisture. We have ample tree acreage in most of the South Georgia farms to thin trees as they should be to get the most good from them in years to come.

Forest Fires-Your Loss

(From the *Jeff Davis County Ledger*)

Have you ever thought of how vitally forest fires effect you? You do not have to own a single acre of forest land to feel the effect. The result of fire damage to the forest and its products is manifold. The direct loss to tree growth, wood-using industries, payrolls, taxes, extended into the millions of dollars annually, and there are numerous intangible losses as great but difficult to appraise.

Forest fires take their toll in destroying the recreational and aesthetic values of wooded acres. Uncontrolled and disastrous forest fires cause great losses in hunting and fishing values, improper flow of water, and soil erosion. Fire is often followed by severe attacks of insects causing enormous additional losses. This waste supports no one and is inexcusable, particularly since all forest products are so necessary to both regional and national economy.

Naval Stores represents a great part of the total income for this county. In view of the values and investments involved, there can be no question of the necessity for everyone to help prevent forest fires.

Trees Are "Oxygen Factories"

(From the *Waycross Journal Herald*)

We have long been aware of the value of trees as a source of beauty and as an important economic factor. But now comes a new valuation of the tree. It is called by scientists "an oxygen factory."

A giant layer of carbon dioxide and other contaminants is forming over this continent, much of it caused by the gasoline combustion engines in the nation's millions of motor cars, buses and giant transportation vans. In time, this layer could be smothering.

A recent conference of 900 scientists called by the U. S. Public Health Service concludes that the best way to control the air contamination is to plant 10 trees for every motor car exhaust in the nation.

The tree renews the supply of pure air for our population by utilizing carbon dioxide and throwing off oxygen. Trees for timber production, for recreation and wild life habitat, beauty, and watershed protection - and now, trees for health protection. We are glad Georgia is among the top states in Tree Farming.



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Beauty Finals Slated May 6

Selection of Miss Georgia Green and presentation of awards for outstanding forestry programs on the state, district and county levels will highlight the 52nd annual meeting of the Georgia Forestry Assn. to be held at the Dinkler Plaza Hotel in Atlanta May 6.

Association President W. M. Ottmeier stated that the Golden Pine Cone and Georgia Tree Farm awards would be made to landowners who have made outstanding contributions to forestry.

May 1 is the deadline for counties under organized forest fire protection to enter Miss Georgia Green contestants, Assn. Executive Secretary Harvey Brown announced. Contestants must be between 15 and 20 years old, single, and a resident of the county they represent. A contestant will be ineligible if she has served in the capacity of queen for another group on a state or regional level. This does not disqualify runners-up. Entries are expected to exceed the 1958 total of 19, Brown said.

The contestants will be judged on general appearance, personality and their ability to meet the public. Plans are in the making for the state winner to take an all-expense paid trip to New York and Washington, D. C., to meet Georgia's congressional delegation. Miss Georgia Green will also participate in various functions of the Association during 1959.

The 1959 Miss Georgia Green Queen contest will see Carroll County trying to win their third consecutive title. The 1957 winner was Miss Janice Threadgill of Temple and the 1958 queen was Miss Wylene Cowart of

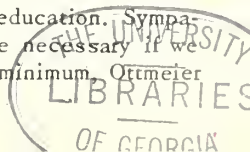
Carrollton.

District office and county forestry units will be recognized for their fire fighting records and all-around general performance. The fire record award is based primarily on the fire danger rating index. One county from each of the ten districts will be presented a general performance award. One will be chosen for the state award. Information and education, over-all forest fire protection and general forestry activities will be considered in making the award. The name of the state general performance award winner will be inscribed on a permanent state plaque which hangs in the Georgia Forestry Commission office at Macon.

Last year the Golden Pine Cone awards were made to Clarence Streetman, H. W. Vaughn and Ottmeier. Vaughn also received the Georgia Tree Farm award.

The Fifth District received first place for outstanding statewide general performance. Washington County won top honors among the counties. Gilmer and Pike-Spalding Counties tied for second place. The most outstanding performance in fire prevention went to Grady County. The Greene-Taliaferro unit was second.

Ottmeier added that the forest fire record set in 1958, due not only to good weather but to efforts in contacting the general public and making it conscious of forest conservation, shows that the Keep Georgia Green program is one of the greatest weapons for use in forest fire prevention and general public education. Sympathetic public opinion and support are necessary if we are to keep our forestry losses to a minimum. Ottmeier said.





STATE BEFORE BURIAL
before Recent Funeral of Pope

Newly-Developed Paper Is Tested by Evening Press

Newsprint Is Processed By Herty Lab

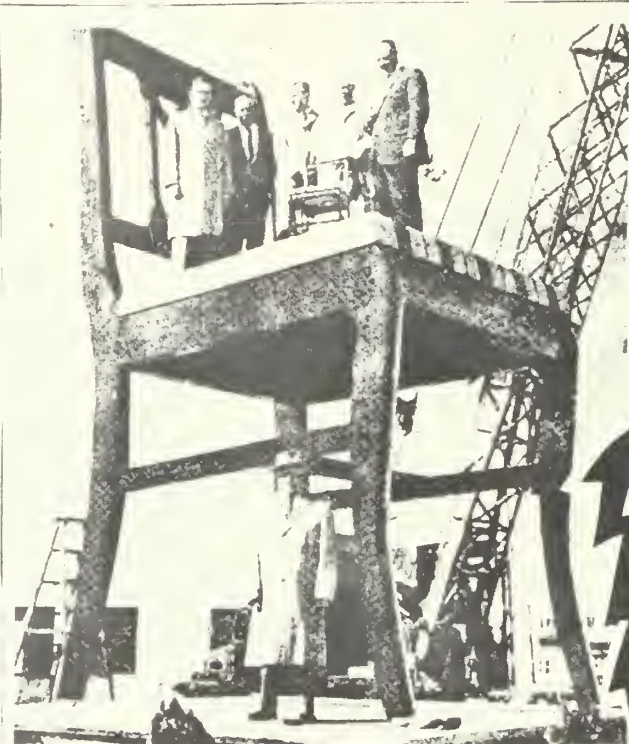
By STEVE HALE

Evening Press Staff Writer
This newspaper is printed on a newly developed paper processed by Savannah's Herty Foundation for the Noralyn Paper Co. of Baton Rouge, La., and made for the first time with Southern hardwoods.
The paper "gives every indication that it can be produced competitively in the current market."

Boy Shoots Woman 'Just Like on TV'

ENGLEWOOD, Colo. (UPI)—A 10-year-old boy picked up early today for shooting a woman in the back told police he did it "just like they do it on TV."
Police said the boy identified as Kerry Dale Casey, acted more like a 17-year-old youth than a boy of 10.

"He showed no remorse whatever when we got him out of bed early this morning," Bill Maragos, chief investigator for the sheriff's office, said.
A house-to-house search was ordered in this Denver suburb Tuesday night after Mrs. Shirley Orlofsky, 32, was shot on the front steps of her home.



KING SIZE—Big enough to accommodate a giant, this solid mahogany chair is touted by its Virginia manufacturer as the "biggest chair in the world." It towers over 19 feet high and weighs a whopping 4,600 pounds. A top of the chair are, from left: J. E. Bassett, builder; Archie Curtis; Charles Curtis; Arthur Curtis; and George Curtis Jr. Standing below is George Curtis Sr. The Curtises own the Washington store where it was erected. (AP Wirephoto)

Outlook Is Dim for Start on Disarmament in Nuclear Age

JOHN M. HIGHTOWER
WASHINGTON (AP)—U.S. officials saw little hope today for any agreement between the Soviet Union and the Western powers for a start on disarmament in the nuclear age.

Secretary of State Dulles says this may be due in some degree to a possible realization among Soviet leaders that despite remarkable scientific achievements the Soviet Union is still behind the United States in the nuclear weapons race in important respects.

Two negotiations are imminent. On Friday the United States, Britain and the Soviet Union will open diplomatic talks at Geneva on a possible ban on nuclear weapons testing, to be backed up by a worldwide international inspection system to prevent violations.

Ten days later panels of Communist state and Western experts will start discussions on the technical problems involved in preventing surprise attack—such things as ground and aerial inspection systems which would be capable of discovering concentrations of troops and weapons in advance of a massive assault.

Administration Leaders Oppose French Proposal

WASHINGTON (AP)—Administration leaders are reported to oppose a French proposal...

President Eisenhower had proposed last summer that beginning...

President Eisenhower had proposed last summer that beginning...

New Pope Says World Wants

Savannah's famed Herty Foundation was the scene this winter of another epochal paper-making discovery which may tremendously increase the value and size of the Southern pulp industry and hardwood timberland.

History amazingly repeated itself in Savannah as Herty technicians, who a quarter of a century ago developed the manufacture of pine newsprint, perfected a newsprint pulp-making process from several heretofore largely valueless Southern hardwoods.

A successful special press run late last fall by the Savannah Evening Press using the bright, tough hardwood newsprint climaxed weeks of labor and expectancy for Herty Director William L. Belvin, his staff and executives of the Noralyn Paper Mills of Baton Rouge, La., who are sponsoring the project.

Cottonwood gum and willow were used in the manu-

facture of the first run of newsprint, which News Publisher Alvah H. Chapman Jr. termed "most impressive from our standpoint."

Hackberry, elm, willow and various gum species are now being studied for conversion to pulp, Belvin said.

"We feel that our discovery will be as revolutionary for the newsprint industry as was Dr. Herty's work with the pine," Belvin said.

"The commercial introduction of this new paper, about which we've already had dozens of inquiries from throughout the North American continent will mean prosperity in the form of new manufacturing plants, cheaper newsprint and expanding markets for other hardwood paper products."

Noralyn President Leo Stack of New Orleans, La., disclosed that he will turn over all data on the new



process to the public domain within two years after his plant goes into production.

Construction will be started soon on the Noralyn paper mill at Baton Rouge. A production target date of June, 1961, has been set, Stack said.

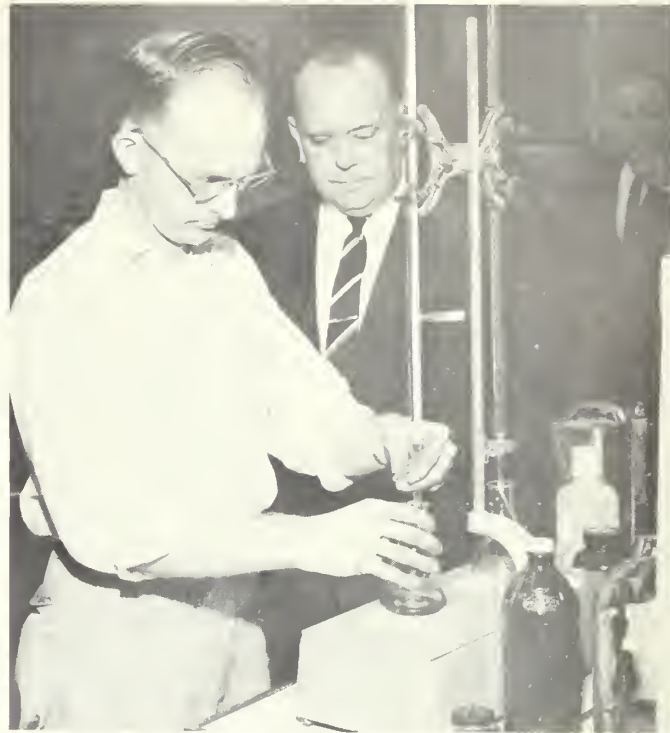
Stack, a life-long veteran of the Southern paper industry, said the new process should mean added prosperity for Georgia, which has an abundance of hardwoods of many species.

"The cull trees are no longer the urchins of our forests," Noralyn Vice President John H. Ainsworth said. "They may no longer be the mavericks of our forests."

Ainsworth, who is a native of Canada and has authored a widely-used textbook on the pulp and paper industry based on his long experience in that field, said the advantages of hardwoods include high density, which gives a good yield through conventional 'cooking' methods, whiter pulp, lower stumpage costs, and an absence of softwood pitch which clogs wires and felts on paper machines.

Although the hardwoods now being tested at Herty are Mississippi Delta species, many of them are found in Georgia. Their presence can mean new pulp mills for Georgia, President Stack pointed out.

"We have a great interest in Georgia," he said. "Any-



Stack visits laboratory



Belvin, Ainsworth check roll

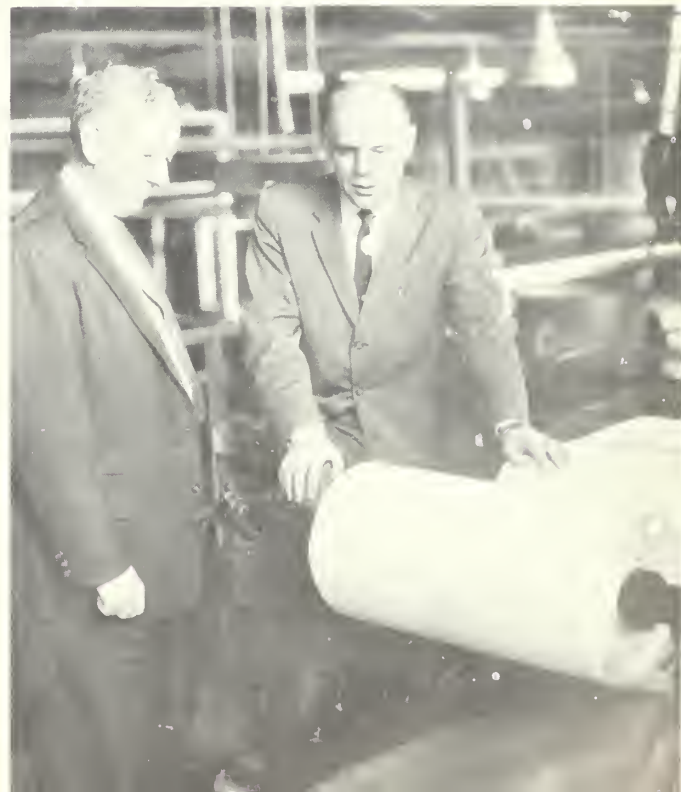
thing we develop that would be of assistance to those who plan to utilize Georgia timber resources will be available to those persons. We'll be most co-operative."

Stack, who was reared and educated in and around Texas, still has the expansive outlook on life attributed to natives of the Lone Star State.

"We're adventurers at heart," he said. "Anybody can build a mill like they've always been built. But that's pointless. The expansion of existing facilities would serve the same purpose."

"We're pioneering a use for hardwood which will establish a commercial value for it and cause a new expansion of Southern and national economy. Our development has already been sufficient to add several billion dollars to the value of areas in the nation where 'trash' hardwoods grow."

Ralph Waldo Emerson once said a wood is a plant whose virtues have not yet been discovered. Now, thanks to privately-financed research by Georgians in a laboratory built with funds granted by the state of Georgia through the Georgia Forest Research Council, the lowly hardwood is fast graduating from the humility of the useless weed tree to the dignity and value of a productive plant.





"But, Mr. Ranger, I just went inside to answer the phone and when I came back fire was all over the place. The wind picked up a piece of paper and spread fire everywhere."

With Georgia forest rangers who know their fires best, the above refrain is sung more often than "Dixie" in this state. From Dade to Charlton, from Seminole to Habersham, there's not a county which doesn't suffer from carelessly set and tended trash and brush fires which get out of control and destroy valuable woodlands.

Fire is destructive enough in a mature forest, but the intensive state-wide pine seedling planting program of recent years has presented the hungry flames with even more appetizing fare.

Thousands of acres of fields have been planted with tiny seedlings which need many years of fire-free growth to attain flame-resistant size. Until they do, the smallest fire will do away with them instantly. Even extreme heat is fatal to young trees.

Fire control isn't a secret, complicated process, Forestry Commission Fire Chief J. C. Turner, Jr. pointed out. Common sense and a little elbow grease will hold fire losses to a minimum. "Just follow a few simple rules and you'll have no field or forest fire prevention problems," Turner said.

Trash Fires Plague Woodlands



All trash should be burned in a container of some type, whether it's a familiar wire incinerator with a lid or a large drum with holes punched in it. The area around the burner should be cleared of all flammable debris, such as paper, pine straw or other potential fuel.

No burning should be done on windy days, as a little breeze can spread sparks and embers before the person tending the fire can stop them. Therefore, the incinerator should be kept well away from wooded areas or grassy fields. Burning should be done only in the early morning or late in the afternoon, when the moisture content of the air is high. This prevents the fire from burning as "hot" as it does in dry air.

Fire Loss Drops To Record Low; Fires Increase

Forest fire losses dropped to another all-time low in Georgia during the calendar year of 1958 despite an increase in the number of fires, Georgia Forestry Commission Director Guyton DeLoach announced.

Total losses were 1,700 acres less in calendar 1958 than in calendar 1957, DeLoach said, and the acreage size dropped three acres per fire from 10.18 acres in 1957 to 7.04 in 1958.

Forest fires destroyed only 49,316 of the 21,094,596 acres protected by the 147-county fire control program. This broke the previous record low loss set during 1957 of 50,989 acres. Losses in 1958 amounted to 23 one-hundredths of one per cent of the forest acreage under fire protection.

The total number of fires, boosted by a severe fall drought, rose to 7,005 in 1958, compared to 5,009 in 1957. Improved fire detection and suppression methods were responsible for the 30 per cent drop in the fires' size, despite their increase in number, Forestry Commission Fire Chief J. C. Turner Jr. said.

DeLoach and Turner pointed out that the increase in the number of fires emphasizes the need for more careful handling of fire by Georgians, as well over 90 per cent of all forest fires in the state are set by humans, either intentionally or through carelessness.

November was the most critical fire month of the year, Turner said, as it saw a fall-long drought reach its climax in Middle and North Georgia. Forests in this area were so dry that DeLoach invoked a ban on all outdoor burning during Thanksgiving week. Rain and snow ended the situation shortly afterwards.

Monthly summary:

	No. Fires	Acreage
January	617	3,597
February	1,317	12,995
March	760	6,124
April	618	4,666
May	201	790
June	214	993
July	87	195
August	136	523
September	361	1,586
October	591	2,598
November	1,329	9,038
December	786	5,863



Another trash fire gets loose

Fire tools, such as rakes, hoes or shovels, should be kept handy to control any flames which escape the incinerator. A large container of water or a portable water pump are handy to have around for emergencies.

If the fire is intended to attain any magnitude, citizens would do well to check with their forestry unit to see if the Notification of Intention to Burn Law has been adopted in their county. The measure requires all citizens to notify their forestry unit before they do any outdoor burning so forestry personnel will know that the smoke is not coming from a wild fire when it is sighted by fire towermen or air patrol. Knowledge of the smoke's origin makes it unnecessary to tie up men and equipment by driving to it to see if it's a fire which is being tended by the persons who set it or if it's a wild fire.

Georgia has been establishing national forest fire control records every year, but even these achievements can be improved with a little co-operation by the state's residents, Fire Chief Turner said.

Fires caused by carelessness wear out equipment and tie up personnel, thus increasing the cost of the forestry program. Fire damage to natural resources is incalculable. Much of this loss can be eliminated if every Georgian will do his part by observing outdoor fire safety.



Homeward the weary firefighters



Commission pilot prepares for patrol

Prescribed Burning

Requires Care

During the fall and winter season, South Georgia wasn't South Georgia without numerous columns of smoke soaring skyward. Fortunately, not all this smudge was wildfire-born.

Scores of prescribed burns—fires set by property owners to perform a definite land improvement or preparation purpose—produced much of it. The reduction of rough, that forest-floor tangle of underbrush, palmetto, gallberry, pine straw, leaves, scrub trees and other litter, was probably the most frequent cause of prescribed burns. Such fires removed potential wildfire fuel and opened land for grazing, naval stores operations or timber harvesting.

Other prescribed burn purposes were seedbed and planting site preparation and disease control. Burning prior to seed fall permitted seed to reach mineral soil and germinate. This burning, however, should have been done long enough before seed fall to allow a light rough to accumulate and protect the seed from hungry birds.

Burning before planting seedlings afforded a fire-proof area for 1959 and reduced the amount of fuel available for later wildfires. The fire also cleared the area so planting crews could operate more efficiently and reduced competition for the seedlings. Burning of longleaf pine areas helped control brown spot disease.





Landowner prepares site....for controlled burn

Although the time for prescribed burns is past, a few reminders on times and techniques may be helpful for landowners who plan to use prescribed burning next season.

Not all forested areas can be burned without damage to valuable timber. Areas with slash pine less than eight feet tall, or with long-leaf above the grass stage but less than six feet tall, timber stands with marketable species of uneven ages, good hardwood producing areas, ponds, swamps, and stream edges should not be burned. The young pines are highly vulnerable to fire. Fire makes hardwoods vulnerable to insect or disease attack or kills them when their roots are near the surface of the ground.

Successful prescribed burns should be conducted only at certain times of the year and day. The timber should be in the December to February dormant period when the tree is less susceptible to fire damage. The fire should be set either early in the morning or late in the afternoon when the moisture content of the air is high and visibility for control purposes is good. The burns should be conducted as soon after a rainfall as the fuel has dried enough to burn, yet is not dry enough to burn with an uncontrolled intensity. The temperature should range from 32 to 60 degrees so there is little danger of damage to frozen tree cells. The wind should be steady and not more than eight miles per hour, as gusty, shifting wind can make a fire unmanageable.

Firebreaks should be plowed around the portions of the area to be burned where there are no natural barriers. Interior firebreaks should be plowed several hundred yards apart to keep the fire from getting too big. Many South Georgia Forestry Commission county units plow pre-suppression firebreaks for a nominal charge. The rangers are always glad to give advice on the safe conduct of prescribed burns.

The fire should be started in a corner of the area and should be set against the wind. The burned area should be carefully patrolled and mopped-up to prevent its spread out of control. Neighbors and the county forestry unit should be advised of the burn so they'll know it's not a wild fire when it's sighted.



Wildfire breaks out

FACTS TO HELP YOU CONTROL. . . .

It has been estimated that disease and insect attacks take a far greater toll of our forests than the more evident forest fires. Slash and loblolly pine suffer heavily from fusiform gall rust or *cronartium fusiforme*, the most common of all forest tree diseases. This disease attacks pines from the seedling stage to maturity. Longleaf and shortleaf pine are resistant to the rust.

Rust infections cause swellings or galls on the branches and stems of trees. A similar swelling occurs near the base of the stems of infected year-old seedlings. On slash pine there is little or no swelling of the stem, but pitch may flow from the gall. In spring, the galls are covered with blisters that break and release spores. As long as the branch or stem remains alive, the gall will continue to grow.

On sites with high fusiform rust content, longleaf or shortleaf pine should be favored over slash and loblolly pine. Maintaining high density of stocking in planted and young stands will encourage early natural pruning of lower branches and will minimize the spreading of branch cankers into the stems. In pruning, do not select crop trees with branch galls less than six inches from the stem. Trees with branch galls more than 15 inches from the stem can be left. Any forms of fertilization, cultivation or prescribed burning, which stimulate early growth in the spring, should be avoided as they may increase the infection.

Trees with stem cankers should be removed first during thinning, as they are susceptible to wind damage, have a low market value and are a menace to other trees. It may be necessary to leave some diseased trees to avoid opening the stand too much, which might increase new infections.

Before rust fungi can reinfest pines, it must pass through a stage of growth on the leaves of various oak species. Branch infections that do not invade the stem have little effect on utility or growth of the tree. Infected seedlings should never be planted.

FOREST DISEASES

The Nantucket pine tip moth is the most common of several species which attack Georgia pines. Shortleaf and loblolly pine up to 20 feet high are its principal victims, with slash pine serving as an occasional host.

The Nantucket moth emerges from its winter home in the stem of the pine about the time that tree growth begins each spring. Inconspicuous flat, yellowish eggs are deposited on the tips of the branches where the terminal leaf will unfold. When hatched, the larvae bore down into the buds and new growth. Inside the tender shoots, they transform into the pupal stage to emerge later as adults and repeat the destructive life cycle.

The boring deforms the main and lateral stems and delays height growth, but seldom kills a tree. Moth damage does delay the time required for a tree to attain marketable size and destroys the tree's ornamental value.

Excess resin on the pine is usually the first clue of the moth's presence. If there is heavy infestation, dead buds and twigs can be found on the main stem or tips of the lateral branches.

Complete control of the tip moth is almost an impossibility, as the insect produces four generations or more each year. However, one per cent water emulsion DDT or BHC, 0.25 per cent gamma isomer, applied at six-week intervals beginning in mid-March, will provide excellent protection. Adequate protection can be obtained by applying BHC in mid-March, late May and



early August. DDT (1 per cent) applied at four-week intervals will control the moths. Due to cost, the application of these chemicals to timber stands is not feasible. Research is now being conducted on the life cycle of the moth to find more efficient and economical control measures.

Recruiting Program Aimed At Superior Student

A recruiting program to interest scientifically-inclined students in the forestry profession has been started by the Georgia Chapter of the SAF and the State Department of Education.

A student recruiting committee, headed by Forestry Commission Information and Education Chief Frank Craven, is setting up forestry committees in each Congressional district in the state. Members of these committees are foresters with a minimum of five years' professional experience.

Craven said the foresters will address students at high schools on career days upon forestry opportunities available to students who have the curiosity to seek new and better methods of performing their jobs.

Forestry career booklets prepared by the Information and Education Department of the Forestry Commission will be given to the students. Special forestry posters will be mounted in the schools. The posters and booklets were financed by the Forestry Commission, Georgia Forest Research Council, the Georgia Section of the Society of American Foresters and the University of Georgia School of Forestry.

Wider and more thorough training of the forester required by increased demands upon his skill during his post-graduate career have raised the forester in profes-

sional stature, Craven added.

The typical forester no longer merely fights fires and plants seedlings. He must be capable of applying the latest scientific methods of timber growth or processing and manufacture of various forest products. Craven pointed out that forestry is now an indoor and outdoor profession. Careers in industrial research, production and management await those men who have the flexibility and imagination to grasp and solve problems as they arise.

To prepare a student with these qualifications, the University of Georgia's School of Forestry includes spacious classrooms, office and laboratory buildings, a small sawmill, edger, naval stores gum cleaning plant and pilot still. There is a 2,000-acre school forest near Athens for the student field problems. During the summer, student forestry camps offer invaluable in-the-forest training.

Serving with Craven on the Student Recruiting Committee are Al Davenport, assistant superintendent of the Conservation Department, Union Bag-Camp Paper Corp., and Ed Kreis, vocational forester for the State Department of Education. Allyn M. Herrick, Dean of the University School of Forestry, is an advisor to the committee.

USFS-GFC Make '59 Research Plans

Research on bulk-piled wood chip storage, depth of penetration and retention of creosote back of acid treated pole faces, log and tree grading of the southern yellow pine, and the rate of drying of hardwood lumber will be conducted in 1959 by Forest Products Technologist Rufus H. Page of the U. S. Forest Service and the Georgia Forestry Commission and USFS Research Forester Joseph Saucier.

St. Regis Paper Co., concerned with the deterioration of chips stored in bulk piles and seeking a means of keeping the chips bright until they are used, asked Page to seek solutions for these problems. A pile of wood chips 50 feet long, 30 feet wide and 10 feet high will be constructed on an asphalt apron at St. Regis' chip yard near Fargo. At predetermined intervals, five foot sections of the pile will be removed. Portions of the samples will be air dried and others will be wrapped in polyethylene glycol or similar containers before being shipped to the Forest Products Laboratory in Madison, Wis. for analysis. In the last section of the pile, thermocouples will be inserted to determine the temperature of interior portions of the pile at stated intervals. Page added that a record of the daily relative humidity, temperature, rainfall and total wind movement would probably be kept.

The power-line pole preservative study will be made at

the Langdale Co. in Valdosta and will involve approximately 80 poles from trees that were worked for naval stores and consequently have bark chipped faces, Page said. Cores collected from the poles will be shipped to the Forest Products Laboratory for depth of penetration and extractive tests to determine the retention of the preservative back of the acid-treated faces. Some utility companies will not buy poles with acid faces near the ground line.

The research on southern yellow pine will add to the data already collected in the log and tree grade study by Paul Bois of the Southeastern Experiment Station and others. Page stated that 60 M ft. of pine logs of varying grades and sizes will be shipped to the Del-Cook Lumber Co., Adel, Ga. from national forests in Georgia, Arkansas, Florida, Mississippi and South Carolina.

The logs will be graded and sawed into lumber by a sawyer experienced in cutting for grade. The lumber will then be graded by inspectors from the Southern Pine Inspection Bureau. Page said the study will be conducted in this manner to eliminate the variables of more than one sawyer, more than one mill and more than one grader.

A study of the uniformity of drying of oak and gum lumber will continue into 1959. The Jeffreys-McElrath Manufacturing Co., at Arkwright and the Speeg Lumber Co., at Macon, are co-operating in this research.

A revision of the "Directory of Wood Using Industries in Georgia" will be made by Page and Saucier early in the year. Page added that the bulk piled wood chip study will begin in the latter part of March and research on the southern yellow pine before the first of April.



Ft. Gordon Practices Profitable Forestry

Trained fighting men are not the only product of Ft. Gordon. Thousands of dollars worth of pulpwood and sawtimber are being harvested annually from the post's 50,000 acres of woodland.

A progressive and expanding forestry program, directed by Post Forester Harold V. Barnett, who operates within the Buildings and Grounds Division of the Post Engineer's Office, is returning some \$70,000 a year to the Treasury, with much more to come.

Last year, more than a million and a half board-feet of sawtimber and 1,550 cords of pulpwood were sold to industry on a sealed-bid basis.

Barnett operates the forestry program with the enthusiastic backing of Lt. Col. Robert E. Hisle, post engineer, Assistant Engineer Bruce L. Rogers and James H. Woody, Buildings and Grounds Division chief.

The varied topography and vegetation of the 55,363-acre post pose a variety of problems. Thousands of acres of understocked land need to be planted. Large areas require the removal of worthless scrub hardwoods. Forested areas need extensive thinning to attain top productivity. Damage from fire, insects and diseases must be controlled.

"We are improving our forest to the point where the government is getting a worthwhile return," Colonel Hisle said. "We also intend to conduct research to improve our forests in every possible way."

Protecting the slash, loblolly and long-

Fort has fine timber stands





Aerial seeding produces results

leaf pines which are the main commercial species on the reservation is a round-the-clock job for Barnett and his four-man crew, for they are on fire call during off-duty hours.

Barnett, a graduate of the University of Florida School of Forestry and a veteran of many years' forestry service in Georgia and Florida, supervises an equipment operator, a timber marker, a truck driver and a towerman. He has been assisted by a graduate forester from the University of Michigan. PFC Alfred E. Wise, who soon will be discharged from the Army.

The foresters supervised the planting this winter of half a million seedlings, bringing the post's reforestation total to 3,125,000 trees since the formal forestry program was begun in 1952. Plans call for planting of a million more trees in 1959-60.

The foresters suppress all forest fires on the post. They fight many off-post fires which threaten government property with the Richmond County Forestry Unit under a special state-federal agreement.

Ft. Gordon had the best fire record in the eight-post Third U. S. Army Area in fiscal 1957-58, losing only 137 acres to 28 fires, for an average loss of less than five acres. This minimum loss was made possible by rapid detection and fire suppression, and by 500 miles of plowed firebreaks, which split the forestlands into compartments and halted the advance of the flames.

The post foresters man a 100-foot fire tower for observation purposes. Georgia

Forestry Commission fire towers in Columbia, Richmond, Jefferson and McDuffie Counties also report "smokes" by two-way radio to the post foresters.

Fire control is aided by two fire-danger stations which yield wind velocity and fuel moisture data and indicate the fire danger each day. Gordon officers study this information carefully and take action accordingly.

During last fall's drought Ft. Gordon commander Col. Paul T. Snowden banned the firing of all incendiary ammunition and explosives on ranges, and allowed hunting and fishing during certain hours only. These precautions helped lessen the forest fire emergency.

The forestry unit conducts frequent prescribed burns to rid the forest floor of litter, which could fuel a disastrous fire if it were not removed.

Barnett is experimenting with the planting of pine seed from a helicopter, which is also used in fire control work. The 'copter sowed 120 pounds of long-leaf pine seed last year on 40 acres of specially-prepared land. The direct seeding resulted an average survival of 1,640 seedlings per acre.

Barnett plans to sow 1,000 pounds of seed (three pounds per acre) this year. The seed are treated with insect and bird repellent to protect them from hungry furred and feathered critters.

Scrub hardwood control is another project Barnett is preparing. He is seeking economical means of removing or killing the worthless, stunted trees which choke out marketable pines on thousands of acres. These cull trees will never grow to marketable size or quality.

The forest area is also being divided into permanent plots, Barnett said, so its management can be directed through a machine-card system. Tree and timber-plot information will be punched on the cards, which can then be sorted mechanically to give instantly any data, such as cutting needs, quality of timber stands, or fire losses.



Post boasts huge trees (U. S. Army photographs)

Research And Education Hold Future Of Wood

The future role of wood and its preservation was emphasized at recent meetings of the Southern Pulpwood Conservation Assn. and Southeastern States Forest Fire Compact Commission in Atlanta and the Society of American Foresters in Montgomery, Ala.

SPCA keynoter Dr. L. R. Thiesmeyer, president of the Pulp and Paper Research Institute of Canada, said that in the future we will see non-woven fabrics made on paper machines. He predicted that disposable paper attire, dishware and moulded products will be produced from timber.

To meet future demands, losses from fire, insects and disease will have to be reduced by improved control measures, pathological treatment and development of genetically sturdier stock. Means of utilizing non-fibrous constituents, weed species and marginal and sub-marginal land must be found through research, Dr. Thiesmeyer said.

New SPCA officers are President Karl A. Swenning, Scott Paper Co., Chester, Pa. Vertrees Young, Crown-Zellerbach Corp., Bogalusa, La., is the incoming vice president.

Professor of Industrial Forestry, Yale University, Z. W. White told the SAF that foresters must broaden their forestry knowledge to keep up with future wood demands. They should not be specialists alone, but should take an active part in promoting the profession and recruiting top-grade men.

Dr. Leon A. Hargreaves, Jr., assistant director, Georgia Forestry Commission, was named SAF section chairman. Donald Stephens, Buckeye Cellulose Co., Fla., was named chairman-elect. Dr. Laurence C.



Wilson steps down; Stephens, Walker, Hargreaves step up

Walker was elected secretary-treasurer.

The Southeastern Forest Fire Compact Commission, formed to furnish each other quickly with personnel and equipment for fighting fires too large for one state to handle, elected a new slate of officers headed by Gene Butcher, Kentucky state forester, Frankfort, Ky. Other officers include J. Hubert Wheeler of Ewing, Va., vice chairman and S. D. Beichler of the U. S. Forest Service, Atlanta, secretary-treasurer. Some 28 representatives from nine states voted to hold a field training exercise this year at a time and place to be named.



Albert takes it on the cuff from Deloach leaving Hargreaves holding the bag.

Research Director Heads '59 Personnel Changes

Director Frank Albert of the Georgia Forest Research Council resigned March 1 to become Director of Timber Management for the southern properties of St. Regis Paper Co., in Jacksonville.

Dr. L. A. Hargreaves, Jr., assistant director of the Georgia Forestry Commission, is serving as acting director of the Research Council until Albert's successor is chosen, Council Chairman Wallace Adams of Glenwood said.

During Albert's administration, construction was begun on the Southern Forest Fire Research Laboratory at the Georgia Forestry Center in Macon, a forest fire weather forecasting service was set up, and numerous research publications were released, including results of the state's first wood residue survey.

Albert received his forestry degree from Pennsylvania State College in 1926 and joined the U. S. Forest Service in 1927. He served in New Hampshire, West Virginia, Florida, North Carolina, Louisiana and Mississippi in various supervisory capacities until he became USFS assistant Region 8 Forester in Atlanta in 1947. He retired in 1957 as chief of the Division of State and Private Forestry and

became Research Council Director.

New faces appeared among the pines and old faces appeared in new places as a result of Forestry Commission hirings and transfers in 1959.

Paul Bledsoe, former Dougherty County ranger, is Assistant First District Forester, Fire Control. Former Colquitt County Ranger Richard Griner has the same position in the Seventh District. Former Elbert-Madison Ranger Marvin Burgess is Assistant Fourth District Management Forester, while ex-Florida forester Paul Butts has joined the Fifth District in the same job. Crisp-Dooly Ranger II Henry Williams is now doing fire control work for the Third District Office.

New county Rangers include John R. Burns, Jr. Dougherty; Theron L. Devereaux, Elbert-Madison; and Tillman Sandifer, Bibb. All three are University of Georgia forestry graduates.

William Berry, also a 1958 Georgia grad, has joined the Morgan Memorial Nursery staff near Macon as a reforestation assistant.

Logging the foresters...

GEORGIANS TO DISCUSS DIRECT SEEDING....Government and private foresters will attend a symposium on Direct Seeding in the South at the Duke University School of Forestry, Durham, N. C., April 21-22. Participating from Georgia are J. W. Johnson, Union Bag-Camp Paper, Savannah; Floyd Cossit and Dr. H. A. Miller, U. S. Forest Service, Atlanta; S. N. Cooper, St. Regis Paper, Fargo; and T. F. Swofford, USFS, Macon.

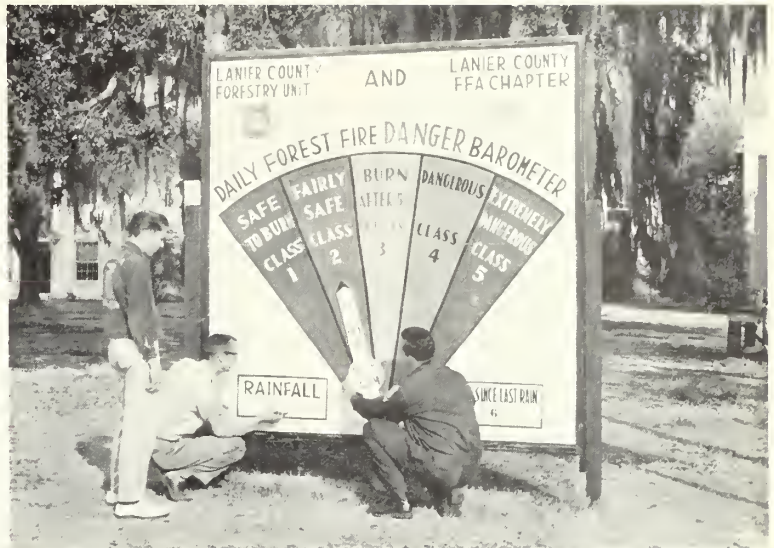
BIGGER TREES NAVAL STORES....More than half the Southeastern naval stores producers in 1958 worked only trees 10 inches or more in diameter, according to John Cooper, Supervisor of the Naval Stores Conservation Program. This meant more gum yield, for each inch increase in the minimum diameter of trees cupped returns at least 25 barrels of gum per crop at no greater production cost, Cooper said. The larger trees also bring better prices as pilings and sawlogs when they are removed from the stands.

SECOND IN TREE FARM ACREAGE....Georgia still trails Florida in the national tree farm acreage race, according to 1958 figures released by the American Forest Products Industries. Florida has 4,665,009 acres, Georgia has 4,533,680, Alabama has 4,366,410 acres and Oregon has 4,031,301 acres. Mississippi leads the nation in number of certified tree farms with 1,455. The entire nation has 48,429,451 acres of tree farms.

LUMBERMEN HONOR RUSSELL....The Southern lumber industry recently honored U. S. Senator Richard Russell for his contributions to Southern forestry at Winder, Ga., when Mose Gordon, Commerce, Ga., lumberman, presented Russell with a plaque containing an enlargement of the cover photograph of the "Southern Pine Story." The picture is a pine seedling nurtured by a hand. The book was published by the Southern Pine Association.

\$4,000 FORESTRY SCHOLARSHIP PROGRAM....Gair Woodlands Corp. Savannah, will award two \$4,000 forestry scholarships in 1959, according to Corp. President T. W. Earle. This is an increase of \$2,000 per scholarship over previous years. One scholarship will be awarded to an outstanding high school graduate from southeastern Georgia or southern Carolina and another from northeastern Florida. Successful applicants will be permitted to choose from the Universities of Georgia, Florida, North Carolina State College and Clemson College. Application forms may be obtained from local high school principals or vo-ag. teachers. The completed application must be returned to local high school principals by March 31, 1959.

WARE PINE FESTIVAL....The second annual Ware County Pine Festival will be held at Laura Walker State Park near Waycross. April 22, according to Festival Chairman William Rentz. The Festival will include forest management demonstrations, selection of the Ware Pine Queen, a barbecue lunch and entertainment. Forestry Commission Director Guyton DeLoach and Extension Service Forester Dorsey Dyer will direct activities, assisted by pulp and paper company representatives. Program chairmen are Forestry Commission Eighth District Forester James Henson and Ware County Agent Tom Boland.



The Lanier County High School Vocational Agriculture Forestry Class is operating the county forest fire barometer at Lakeland. Lowndes County Ranger Ed Pierson furnishes them the class fire day from Valdosta.



More than 300 Early County residents were presented a seedling bundle containing pine and red cedars at a recent open house of the Early County Forestry Unit. Ranger W. G. Middleton, assisted by "Smokey" and local agricultural officers, explained the unit's operations.



Forester Bob Tift, Union Bag-Camp Paper Corp., observes woodland owners demonstration of the Little Tree Injector held recently at the Coffee-Atkinson County Unit near Douglas. Approximately 50 woodland owners saw demonstrations on fire and hardwood control, reforestation, utilization and harvesting, naval stores and selling methods.

Georgia FORESTRY

SPRING, 1959



FROM SOFT REEDS TO HARD WOODS

Papyrus, made from the papyri reed which grows in profusion on the banks of the Nile, was invented for Egyptians to hieroglyph upon when some long-forgotten pharaoh requisitioned all the stone writing tablets for his latest pyramid. Now, Georgia chemists on the banks of the Savannah have developed a newsprint from the hardwoods which grow in confusion on the banks of the Mississippi, and Georgia rivers, too. Look inside for more details of this discovery

ALVIN M. HERRICK, DEAN
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Cruising the News

Must For Forests

(From the *Savannah Morning News*)

The timber and conservation committee of the December term grand jury called attention to a law which should be strictly adhered to in the interest of protecting Georgia's important forestry resources.

A recently adopted law makes it obligatory that anyone who plans to start a brush fire of any size in a field or wooded area notify ranger headquarters. If this is done before the fire is started, it gives the ranger an opportunity to set up certain safety measures whereby the fire can be kept under control.

A potentially dangerous fire in Savannah in the American Cyanamid plant area would have been much more serious if fire fighters had not taken prompt action. In rural areas, of course, a rapidly spreading fire might not be noticed readily and assistance would not be immediately at hand.

This means that extra precautions should be taken in rural areas and notifying the ranger of planned brush fires is one rule that should never be overlooked.

Intelligently protected forest assets mean hundreds of millions of dollars in our state's total income each year. We must give our forests the maximum possible protection.

Selective Tree-Cutting Booming

(From the *Macon Telegraph*)

The demand for aid in marking trees for selective cutting on privately-owned small woodlots has grown so rapidly in Georgia that the Forestry Commission is finding it increasingly difficult to keep up with requests for help.

The owners of small woodlots in our state are many. Around 75 percent of all timber in Georgia is owned by farmers who average around 100 acres in trees. For these the Commission lends the farmer the help of a trained forester who marks diseased, crooked or limby trees that need to be removed, plus such smaller trees that should come out to stimulate growth of remaining trees.

From the Commission's Macon headquarters comes the report that the demand for the services of the 20 management assistants in the districts is often delayed by several months.

The demand is good news, though we regret that a landowner must wait for the marking service he needs. If the demand for aid in timber management continues to grow, the Commission can be expected to provide for it.

Keep Jeff Davis County Green

(From the *Jeff Davis County Ledger*)

You, as a citizen of Jeff Davis County, can do a great deal toward setting new records of forest fire prevention and suppression in Jeff Davis County. Whether you are a farmer, housewife, businessman or student, you can help make forestry in Jeff Davis a permanent industrial factor contributing greatly toward the economy of our county.

Did you know that nearly 99 per cent of all forest fires are caused by the carelessness of men, women and children? A lighted cigaret tossed heedlessly into dry brush can cause a major forest fire. People like you and me can prevent such catastrophes by making sure our fire is DEAD OUT.

Our district forester told citizens of this district, "Forest fires often cripple a county's economy and even the economy of the state." The damage they do is manifold.

Jeff Davis County citizens have an abundant forest wealth which should serve to stimulate a growing concern and interest for the establishment and operation of a county forestry unit in Jeff Davis.

STATE WINDING
 KEEP GEORGIA
 Beautiful

First citizen meets first beauty



Gov. Ernest Vandiver, Lt. Gov. Garland Byrd and the largest and loveliest group of beauty contestants in years featured the 52nd annual meeting of the Georgia Forestry Association in Atlanta last month.

The Carroll County entrant was named Miss Georgia for the third consecutive year. Miss Barry McDonald of Carrollton, a tall and beautiful brunette high school senior, was selected over a field of 29 lovelies. Miss

Priscilla Marshall of Early County was the runner-up in the judging based on poise, personality and beauty.

Pierce County in the Eighth Forestry District took first place in the statewide general performance rating. Richmond County in the 10th District was second. Other counties which led their districts were Tattnall, Worth, Crisp-Dooly, Pike-Spalding, Dodge, Washington, Whitfield and Floyd tied in the Seventh District, and



Rhodes, Conger, Osbolt, James, Thomas, Christian, Strickland, Beauchamp

Gwinnett.

The Third Forestry District has the outstanding statewide general performance rating. The Seventh District was runner-up. Echols County has the best fire protection record.

New GFA officers are J. Frank Alexander, Talbotton, president; William Oettmeier, Fargo, first vice president; and A. E. Patton, Atlanta, treasurer. New directors are J. S. Gainer, Covington, Ivy Duggan and R.H. White, Jr., Atlanta; Jim Gillis, Jr., Soperton; and Sidney Cooper, Brunswick.

Governor Vandiver was certified as Georgia's 500th tree farmer at the evening banquet. He declared that the "economy of the state is inextricably bound to forestry" and told those present that the "economy of the state is tied to your efforts in the next 20 or 30 years."

Lt. Gov. Byrd delivered the keynote address at the afternoon business



Taylor



Priscilla Marshall, Early



Charlton



Schley



Ware



Lincoln



Richmond



Wilkinson Co. runners-up who limped in

session, which featured state, federal and industrial forestry leaders. The Taylor County tree farmer hailed pines as "one of our biggest money crops." He emphasized the future importance of Georgia's forests and pointed out that good forestry and government both require active participation by citizens. The meeting theme was "One Tree Generation Away."

A tremendous amount of hard work brought the county beauty queens to the Atlanta finals. Elaborate beauty contests entered by dozens of girls and attended by hundreds of spectators were held in theaters, auditoriums, gymnasiums and parks in Ware, Toombs, Lincoln, Schley, Taylor, Dodge, Wilkinson, Charlton, Richmond and Oglethorpe Counties.



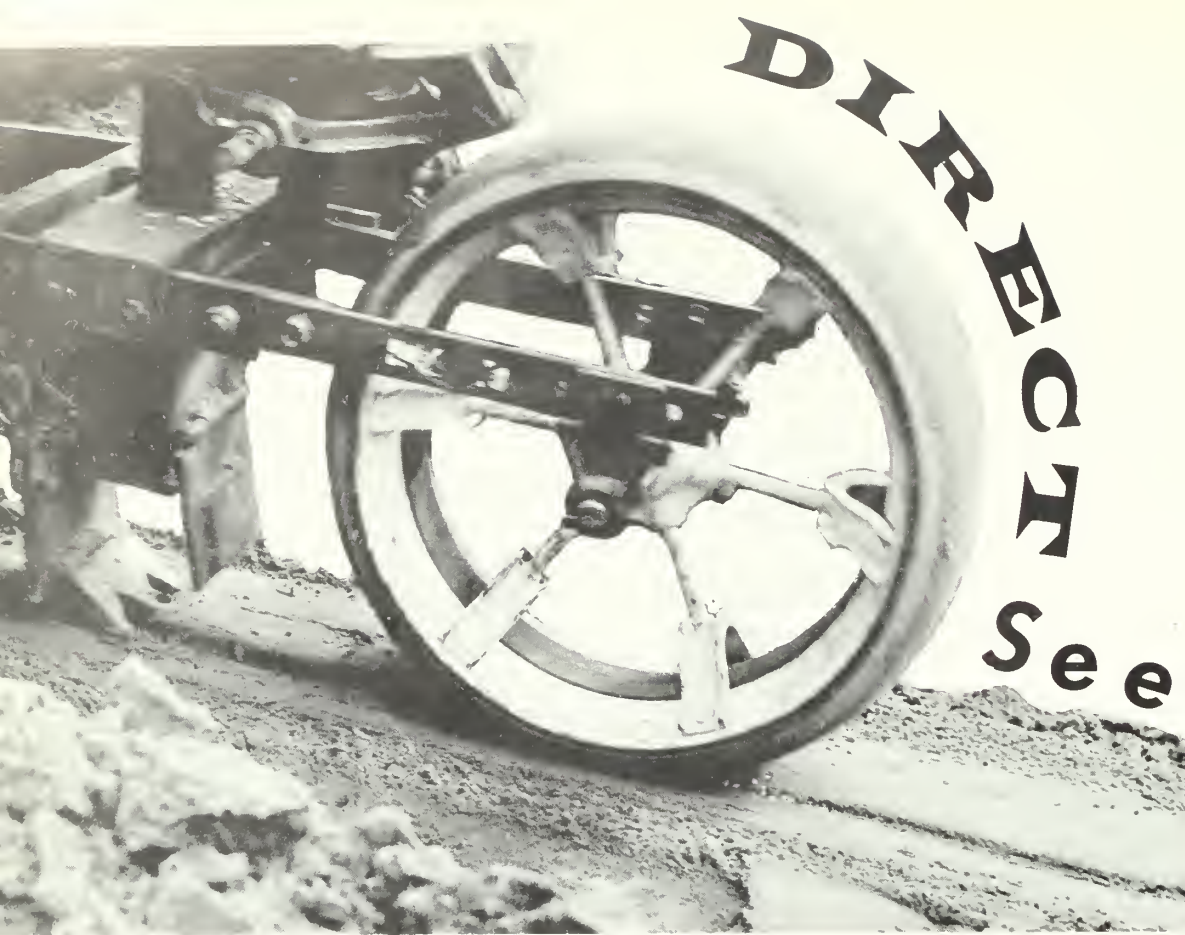
Dodge



Toombs



Wilkinson



DIRECT Seeding

Foresters and landowners early this year observed Middle Georgia's first direct pine seeding by a mechanical planter. Southern Seed Co. conducted the demonstration with a Webster Planter on a three-acre tract belonging to Frank Prior near Dublin.

Four thousand bird and rodent repellent-treated seed were planted per acre. The cost was five dollars per acre. A spring check of the planted area showed satisfactory seed germination with an average of one seedling every 36 inches. Some fail spots of 25 to 30 feet were noted, however.

Slash and loblolly seed were planted by a fire plow and planter pulled by a crawler tractor. A wheel attached to the planter pressed the seed into the ground. The plow cleared brush and exposed the soil. This reduced competition from grass and weeds for a year or two.

Direct seeding is the practice of planting seed by hand seeder, airplane, hand broadcasting or mechanical planter on the site where the tree will grow. Extensive research in this method of reforestation is underway in the South. An important breakthrough in this field was the development of an effective repellent to protect the seed on the ground from hungry rodents and birds. Pulp mills and other groups have already used direct seeding to reforest some areas for commercial purposes.

Direct seeding eliminates the transplanting shock which nursery-grown pines undergo, but some of its disadvantages include the absence of an opportunity to grade and discard seedlings of an inferior quality and size before planting, the year's growth start a nursery-produced seedling obtains before transplanting; less



Seeder operates well in rough

control of spacing the trees during planting; the probable necessity of thinning the trees before they reach salable size to give the remaining trees growing room; and dependence on plentiful rainfall to insure survival.



Ruark, Sessoms Assume Duties

A new Research Council director and a Forestry Commissioner assumed office this spring. H. Edward Ruark, former land acquisition manager of Owens-Illinois Glass Co., Jacksonville, Fla., is the new research director. Alexander Sessoms, farmer and timber operator of Cogdell, is the new member of the Commission.

Ruark will co-ordinate and initiate forest research projects in Georgia conducted by state, federal and private agencies. His office will be in the headquarters building of the Forestry Commission at the Georgia Forestry Center near Macon until the new Southern Forest Fire Laboratory is completed at the Center.

A graduate of the University of Georgia School of Forestry, Ruark served as a major in the infantry in the European theater, where he was awarded the Bronze Star. Upon discharge, he was associated with the Haws-Hardin Lumber Co., and Carolina Foresters Inc., in Walterboro, S. C.

In 1950, he joined the Georgia Forestry Commission as Fire Control chief, and served until February 1957, when he joined Owens-Illinois.

Sessoms follows in the footsteps of his late father, Alex K. Sessoms, as a Forestry Commissioner. The elder Mr. Sessoms was an associate of the late Dr. Charles Herty and did much to develop Georgia forestry.

The new Commissioner, who has been associated with various phases of forestry all his life, manages his family's land holdings, farms, is president and treasurer of the Union Timber Corp., Cogdell, is a director of the Empire Banking Co., Homerville, a member of the Clinch County Industrial Board and has been chairman of the Clinch County Board of Education for a number of years. He is a graduate of Georgia Tech, is married and has two children.



Ruark (top), Sessoms

USFS Starts New Forest Resources Survey

A survey of Georgia forest resources, the first since 1951-53, will be started this summer by U. S. Forest Service personnel, with the additional backing of the Georgia Forestry Commission, Research Council and Forestry Association.

The two-year project will cost more than \$300,000 contributed by the four groups, and other interested parties. When completed in 1961, it will present a complete picture of Georgia forest resources. Field work will require 24 months. The published report will be released four months later.

Mackay Bryan of the Southeastern Experiment Station, U. S. Forest Service, Asheville, N. C., will be in charge of the inventory, which will be available to industry, industrial development commissions and the public.

The inventory will enable a measurement of trends in land use and timber by size, specie and types of timber on various sites to be compared with the 1953 forest survey. The inventory will be divided into five geographical units: coastal plain, one and two; southern piedmont, three; northern piedmont, four, and mountains and foothills, five.

The survey is designed to provide accurate, up-to-date

information on Georgia forest resources to interested industries. Companies considering plant expansion are interested in up-to-date information on timber volume, stocking and rates of growth and cut within the drawing territory of the mill. Industries considering land acquisition will be interested in ownership, forest type, stocking and site quality statistics provided by the survey.

Survey statistics on trends in stand condition and species composition may indicate management programs or cultural treatments that should be started on company lands or encouraged on other ownerships. Where the survey indicates a strong trend toward the invasion of pine lands by low-grade hardwood, prompt action might be started to reverse the trend through measures such as hardwood control followed by planting.

If an eventual shortage of raw material is indicated in an area, rotation geared to the greatest possible production or a longer rotation with a diversified production might be adopted. Industries which require high-quality timber use special tabulations of volumes to locate quality timber. Conversely, industries using low-quality timber can locate mill sites and raw material by studying the survey.



Battle Above the Clouds

Prompt, all-out suppression and timely rain put the quietus on a serious forest fire blowup situation in Northwest Georgia April 6-10. Georgia Forestry Commission emergency firefighters and equipment descended on red-hot Dade, Walker, Pickens and Chatooga Counties by ground and air where, despite the efforts of several interested firebugs, they had the situation well in hand by the time relief-bringing rain fell in the area on the night of April 9. Camp broke up the next morning.

Most of the smoke and flame emanated from the rugged mountains of the three counties, where 22 fires burned 1,900 acres of woodlands in four days. Commission firefighters took a page out of Civil War history as they refought the battle of Lookout Mtn., which stretches through Dade, Walker and Chatooga, but in clouds of smoke instead of mist.

A dry March created the danger situation, which came to a head over the weekend of April 4-5. Plagued by repeated fires in the 'hot' counties, Seventh District Forester Julian Reeves sent out a call for help on Monday, April 6. His weary men were too few.

Fire Control Chief James Turner contacted all other district foresters, who sent tractors, trucks, men and planes from rain-protected district offices and counties. Arson investigators were sent from other districts to take the heat off the firefighters by putting it on the persons setting the fires.

The Forestry Commission's emergency communications and kitchen trailers, supply and maintenance equipment rolled into LaFayette from Macon



Drop-in for lunch



Crew chief watches tractor tackle hill



Bomber awaits fire-killing chemical



Mop-up on fire line

operated out of the LaFayette airstrip, along with light air patrol planes from the First and Ninth Districts. The little monoplanes flew low over the flaming mountains to direct men and equipment through the difficult terrain.

Many miles of firebreaks were raked by hand because the burning slopes were too steep or rocky for tractors to operate or their plows to turn up furrows. By Wednesday morning, approximately 85 men were operating under a previously established organizational plan. By Thursday night, the fires had been reduced to one smoldering area on Lookout Mtn. With the Georgia emergency contained, the TBM was dispatched by Forestry Commission Director Guyton DeLoach to North Carolina, where forest fires were raging along the Atlantic coast. The Tar Heels had asked for help under the terms of the Southern States Forest Fire Compact Commission.

late Tuesday night. Camp was set up at the old Walker County Home. Two-way radio and telephone service was soon functioning to speed the fire fight.

The highlight of the North Georgia campaign was the debut against a going fire of the Forestry Commission's TBM, which had been modified and equipped with tanks to drop fire retardant chemicals. Excellent results were obtained from monoammonium phosphate, a plant fertilizer which was mixed with water.

Two hundred twenty-gallon drops knocked down and held running fires along a 200-foot front. U. S. Forest Service technicians mixed the slurry and helped load the plane, which



General Services keeps 'em plowing



Factors influencing growth and survival of one to three-year-old slash and loblolly pine plantations, Georgia's most prevalent species, are being studied by the Forestry Commission Management Department to improve state pine production.

Management Field Assistant John Hammond of Macon is surveying such growth and survival factors as rainfall, nursery source, time and method of planting, ground cover, place of planting, soil characteristics and percentage of

Commission Studies Pine Growth, Survival



Soil auger

fusiform rust and tip moth damage. The study is being carried out by geographic provinces to obtain uniformity in the influencing factors. Disease and insect resistance is also being checked.

The survey has been completed in the Sandhill and Upper Coastal Plain Provinces, which include 21 counties along the upper and lower fall line between Columbus and Augusta. First observations indicate a heavy infestation of tip moth in the loblolly stands. Fusiform rust has been found in both species.

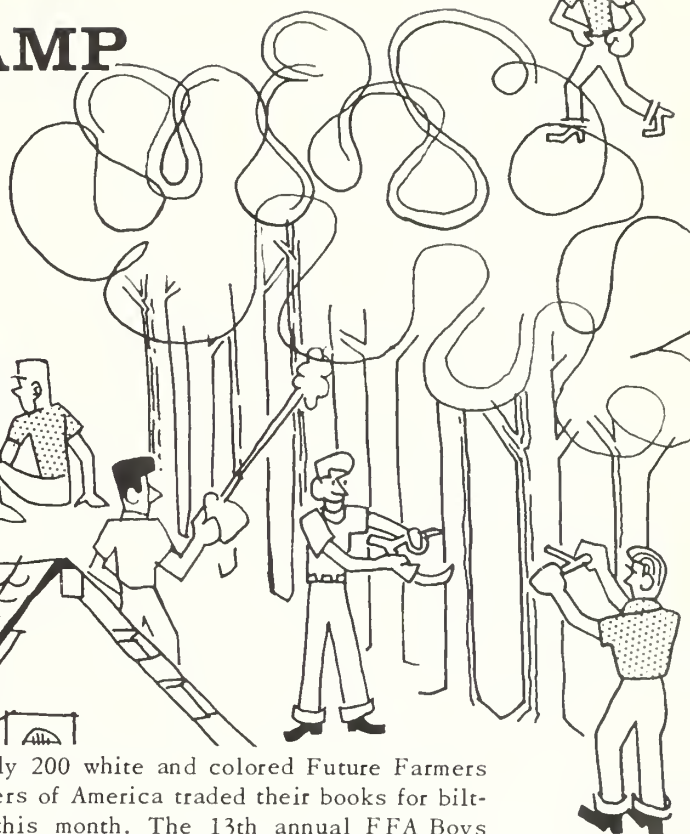
Hammond conducts the survey in each county by checking some 14 tree plots, containing approximately 100 trees each. Samples are taken of type and depth of surface soil and distribution of pine species as to spacing and site. Field work can be conducted only during the trees' dormant period of October to March to prevent the height variation which growth produces.

The sampling is restricted to old field plantings because cut-over, untilled plantations are not numerous enough at present to get a sound comparison between the two types of sites. Plantations unduly affected by fire, grazing and cultivation are not sampled.

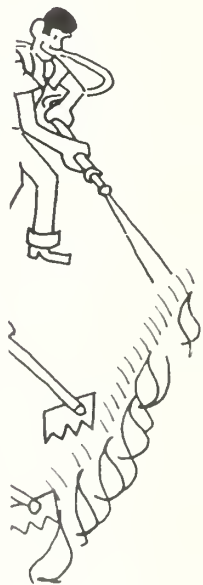
The survey is also being continued in the Piedmont Plateau and Middle and Lower Coastal Plain Provinces, where 70 per cent of Georgia's pine growth occurs. Secondary growth areas which will be surveyed are the Cumberland and Mountain and Intermountain Plateau and the Valley and Ridge Provinces. The U. S. Forest Service is a joint sponsor of the study.

Georgia's 1959

BOY'S FORESTRY CAMP



Approximately 200 white and colored Future Farmers and New Farmers of America traded their books for biltmore sticks this month. The 13th annual FFA Boys Forestry Camp, for Middle and South Georgia boys, was held at Kolomoki State Park near Blakely, June 15-20. The first colored NFA Boys Forestry Camp was conducted at Camp John Hope near Ft. Valley, June 1-5. Both camps were sponsored by six mills of the Southern Pulpwood Conservation Assn. and conducted by the Georgia Forestry Commission and Vocational Agriculture Division of the State Department of Education.



The young foresters studied fire control, insects and diseases, harvesting and marketing, mensuration, reforestation, law enforcement and thinning. Cash prizes were awarded the three lads at each camp who made the top scores on an exam covering their week in the woods. Certificates were awarded all who passed the test.

Extensive recreation, including swimming, softball, horseshoe pitching and fishing, featured each camp. A highlight of the FFA camp was a tour of International Paper Company's experimental forest near Bainbridge, Ga.

Frank Craven, Georgia Forestry Commission Information and Education Chief, directed both camps. Staff members were provided by the sponsoring agencies. Representing the Forestry Commission are David Crook, John Stokes, Charles Place, Jr., Al Jacobs, Jim Hill, Bill Schultz and John Dickinson, assistant district foresters, Tom Hankinson and Sam Thacker, assistant management chiefs, Bob Gore, chief Investigator, John Currie, information and education assistant; and Bill Berry, Morgan Nursery.

Tom Leetch, Gair Woodlands; Don Sonnen, Georgia Kraft; Art Collins, U.S. Forest Service; Jim Malsberger, International Paper Co.; Jim Colson, St. Mary's Paper Co.; Bill Murray, Georgia Extension Service; Ed Foreman and Lamar Merck, Union Bag-Camp Paper Co.; and Ed Kreis, Dept. of Education.

**Blakely,
JUNE**



SPCA Dedicates 19 Pilot Forests



Breaks halt Putnam woods blaze

Fire Losses Soar In '59

Georgia forest fire losses through April were running 45 per cent ahead of 1958, according to Georgia Forestry Commission fire reports.

"Georgians must definitely exercise more care in the handling of outdoor fire," Forestry Commission Director Guyton DeLoach warned. "Trash fires should be carefully tended and field-clearing fires should be set only under safe conditions. Our forestry units are glad to furnish safe burning information."

"Our forests are worth more than ever, for the value of standing timber is increasing. The construction of new pulp mills and the expansion of others in Georgia emphasizes this."

DeLoach also pointed out that the accelerated reforestation program pushed by the state and industry in the past few years has filled Georgia fields and forests with almost a billion young trees—all still small enough to be highly susceptible to serious damage or destruction by fire.

Four month fire losses in the 146 counties under organized fire protection are 41,109 acres, compared to 28,360 acres in 1958. There were 4,375 forest fires through April 30, compared to 3,488 in the same period of 1958. Total losses for 1958 totalled only 49,316 acres.

Several new or unusual factors have contributed to the 1959 losses, Commission fire control officials pointed out. The introduction of aerial fire patrol by highly-trained Commission pilots in four forestry districts encompassing 56 counties resulted in the reporting of more fires than fire towers alone could locate previously. Improved aerial detection in four other districts boosted their fire totals.

Surprisingly, heavy rains in many areas rendered fire suppression more difficult instead of easing the problem. Boggy terrain prevented tractors from getting close enough to fires to plow fire breaks which would have held the blazes to small acreage. Tractors frequently bogged down in wet areas and fires burned more acreage while the tractors were being freed. Stormy weather brought more winds than usual this spring, which caused fires to spread quickly and burn more intensely.

A wet March also delayed farmers' field preparation efforts. Consequently, they burned off many fields within a short period in March and April with the result that forestry units frequently found themselves with more wild fires than they could handle at one time. Fire suppression units were often summoned from adjacent counties, which gave fires longer to burn before they could be controlled.

Nineteen timber tracts, typical of the areas in which they're located, were dedicated as "Pilot Forests" on Georgia Pulp and Paper Day this spring by state forestry leaders.

Sponsored by the Southern Pulpwood Conservation Assn. in 12 Southern states, the "Pilot Forests" will serve as demonstration areas to show small landowners how to improve forestry production and encourage them to develop the economic potential of their forests.

The need for improved yields in Georgia, where seven out of 10 woodland acres belong to the small landowner, is emphasized by pulp production figures released by the SPCA. Georgia forests have a potential pulpwood yield of one and one-half cords per acre per year, compared to a present output of four-tenths of a cord.

The "Pilot Forest" program, according to state chairman Kirk Sutlive, Union Bag-Camp Paper Corp., Savannah, should help eliminate this deficit by showing landowners how to perform scientific harvesting, control undesirable species of trees, establish fire control, plant seedlings and institute any other needed practices.

This work will be done by pulp mill foresters on the "Pilot Forests," which will serve as living examples of good forest practices. Any income derived from the "Forests" will go to their owners. Records on labor and equipment expense and use will be kept on each tract and will be available for study in planning forest development programs for other landowners.

Georgia's pilot forests, which are the most numerous in the South, are located in Bartow, Charlton, Coffee, Effingham, Emanuel, Fulton, Gwinnett, Jefferson, Lowndes, Mitchell, Monroe, Morgan, Stewart, Sumter, Talbot, Toombs, Warren, Wayne and Worth Counties.



Forestry beauty queens filled the fourth floor of Davison-Paxon Co. at the recent week-long Salute to the South sponsored by the Atlanta department store. Attending a special fashion show and meet-the-public event were three 1958 queens—Miss Wylene Cowart, Carrollton, Miss Keep Georgia Green, Miss Rosamond Bogle, Cuthbert, Miss Plywood, and Miss Patsy Edenfield, Swainsboro, Miss Pine Tree, and Miss Gum Spirits of Turpentine for 1959, Miss Flo Ann Milton of MacClenny, Fla.

The girls met shoppers one morning in a special display area which included a Georgia forest products exhibit erected by Information and Education

Forestry Gets Davison's Salute



Window display

personnel of the Georgia Forestry Commission.

Davison's also devoted a street window to a forestry exhibit. Hundreds of Georgia and some out of state youngsters were signed up as Junior Forest Rangers by Forestry Commission rangers from the Fulton, North Fulton, Douglas, Newton-Rockdale and Clayton County Units, who manned the inside exhibit's information booth.



Forest products exhibit



Sawmillers Told How To Get In The Chips



Craven sums up school

Smart sawmillers no longer let the chips fall where they may. They ship the once-valueless residue to the nearest pulpmill. Some 75 North Georgia mill operators learned this and other revenue tips at a recent timber utilization conference at Trenton.

More efficient use of pine timber for sawlogs and pulp chips was the subject of the school, taught by government and industrial foresters and manufacturers including sponsors Rufus Page, U. S. Forest Service and Georgia Forestry Commission wood technologist, Thomas Ramke and John Lehman, TVA, and H. O. Baxter, Georgia Agricultural Extension Service,

A feature of the school was a film on a new wood saw which produces chips instead of sawdust. The saw, invented by J. T. Griffin of Valdosta, is now being tested at the Forest Products Laboratory, Madison, Wis.

The value of wood residue was emphasized by Ernest Clevenger of Corly Mfg. Co., Chattanooga, Tenn., who pointed out that approximately 300 Southern sawmills produced some 24 million dollars worth of residue in 1958.

The use of debarking equipment was recommended for all mills. Profit rises with timber quality. Seven inch tree diameter inside the bark was termed the minimum profitable sawmill size.

Baxter led a panel discussion on wood chip specifications and marketing possibilities which included A. L. Dyer, Trenton; D. M. Dyer, Hiwassee Land Co., Calhoun; Robert Nelson, Rome Kraft, Rome; A. A. Ringland, Jackson Industries, Birmingham; and Gus Jacobson, Soderham Machine & Mfg., Talladega, Ala. Frank Craven, Forestry Commission information and education chief, summarized the conference. A tour of debarking, chipping and milling operations at the Dyer Lumber Co. concluded the day.

Nursery Soil Improvement Study Underway

Additives which will enable pine seedlings to be grown each year in the same soil without loss of quality are being sought at two Georgia Forestry Commission tree nurseries. A five-year study is underway at Page-Walker and Morgan Nurseries to discover if annual additions to nursery soil of organic matter and fertilizer can replace the present soil building method of rotating cover and seedling crops.

Discovery of a satisfactory soil-building combination of sawdust, pine bark, manure and/or several types of fertilizer would mean that the entire acreage of each Commission nursery could be used for seedling production each year if necessary instead of planting portions in cover crops to replenish the soil nutrients depleted by previous seedling crops.

Dr. Jack May of the University of Georgia School of Forestry developed the study and is technical adviser while nursery superintendents Mack Neal and Donald Jones are supervising the actual research operations.

Five-acre tracts of slash pine planted 40 seedlings to

the square foot comprise the area used for the study at each nursery.

Slash is being used because more of it than any other pine species is grown by the Forestry Commission.

The five-acre tracts are divided into plots which are planted in varying yearly rotation with slash pine—alternate slash and cover crops, two years of slash followed by one year of cover crop, three years of slash and one of cover. Cover crops are soybeans and cowpeas, which are plowed back into the soil to enrich it.

Plots have also been set aside for the continuous growth of slash pine seedlings, using only varying additions of the organic matter and fertilizer as soil replenishers. Seedling size, color and root and top development will be taken each year to check their quality. Soil tests will be made to determine the nutritional content of the soil. Their results will indicate the amounts and types of additives needed to restore the soil to satisfactory fertility.

Logging the foresters...

TWO MORE JOIN UP....Houston and Randolph County Commissioners voted this spring to join the forest protection program of the Georgia Forestry Commission. Forestry headquarters, fire towers, personnel and equipment will go into action July 1 in both counties. Georgia now has 148 counties and 21,230,120 acres of woodlands under the fire protection and supervision of its state foresters.

FOREIGN INDUSTRY...was the theme of the annual Georgia Chapter of the SAF-University of Georgia Forestry Alumni meeting in Savannah June 11-12. Forestry in Germany, India, Czechoslovakia and Canada was discussed, respectively, by E.V. Brender and J.D. Strange, USFS; Barry Malac, Union Bag-Camp Paper Corp.; and Dick Dyer, Bowaters Paper Co.

REVISED EDITION....The second edition of the "Directory of Wood Using Industries in Georgia" is now available from the Forest Utilization Service, Box 1183, Macon. Authored by Rufus Page and Joseph Saucier, the new edition features lists of state pulp mills and saw mills which use debarkers and chippers.

TOP 'DOGS....A team of University of Georgia forestry school students won the field and classroom championship of the Southern Forestry Schools Conclave for the second straight year from a field of 10 other schools. The outing, held at Camp Grant Walker near Alexandria, La., was sponsored by Louisiana State University, which tied with Florida for second.

FORESTERS TURN LITERARY....Two new Georgia Forest Research Council publications appeared this spring: "Forest Genetics," by Dr. Mervyn Reines and J. T. Greene, a progress report for 1956-57; and "Forest Soils and Silviculture in Georgia," by Dr. Laurence C. Walker and Henry F. Perkins. The publications are available from the Georgia Forest Research Council, Box 1183, Macon, or the University of Georgia School of Forestry.

FORESTRY AND PEOPLE....is the theme of the 59th meeting of the Society of American Foresters at the Sheraton-Palace Hotel, San Francisco, November 15-18. Nine technical sessions including 60 papers on all phases of forestry and related subjects such as wildlife, recreation, watershed and range management, will be presented.

SAFEST IN GEORGIA....The Owens-Illinois Glass Co. pulp mill in Valdosta won an award for safe operation in 1958 at the recent 16th annual meeting of the Southern Pulp and Paper Safety Assn. in Macon.

NURSERY CONFERENCE....Tree seedling growers from throughout the Southeast attended a week-long school in Athens recently and studied nursery operation from employee counseling to micro-organisms in the soil. Federal, state and private foresters, scientists, representatives of industry and the professors all appeared on the program.



Now, at last the Georgia Forestry Center has a queen of its own. Miss Madeline Johnson, secretary for Director Guyton DeLoach and several department chiefs, was recently picked Queen of the Monroe County Industrial Day festivities at Forsyth.



Smokey was teed off at woods burners at the Augusta Masters Golf Tournament parade at Augusta this spring. Tenth District and Richmond County personnel constructed the biggest and most elaborate float in Forestry Commission history for the gala Augusta event.



This South Georgia FFA member was applying so much elbow grease at the FFA Forestry Field Day at Homerville that he had to don a guard to keep the elbow from flying off. Atkinson County High won the day's events, with host Clinch County the runner-up. Other entrants were high schools from Charlton, Lanier and Ware Counties and Tifton.

Georgia FORESTRY

JUNE, 1959



You'll Get The Point....

.....of a carefully planned and executed forest management program just like the French knights did at Agincourt way back when the British citizens' army mowed down the heavily armored horsemen with bows and arrows of stout English wood. Mow down invading cull trees and grow more pines and you'll score a bulls-eye which will mean prosperity for you and your state.

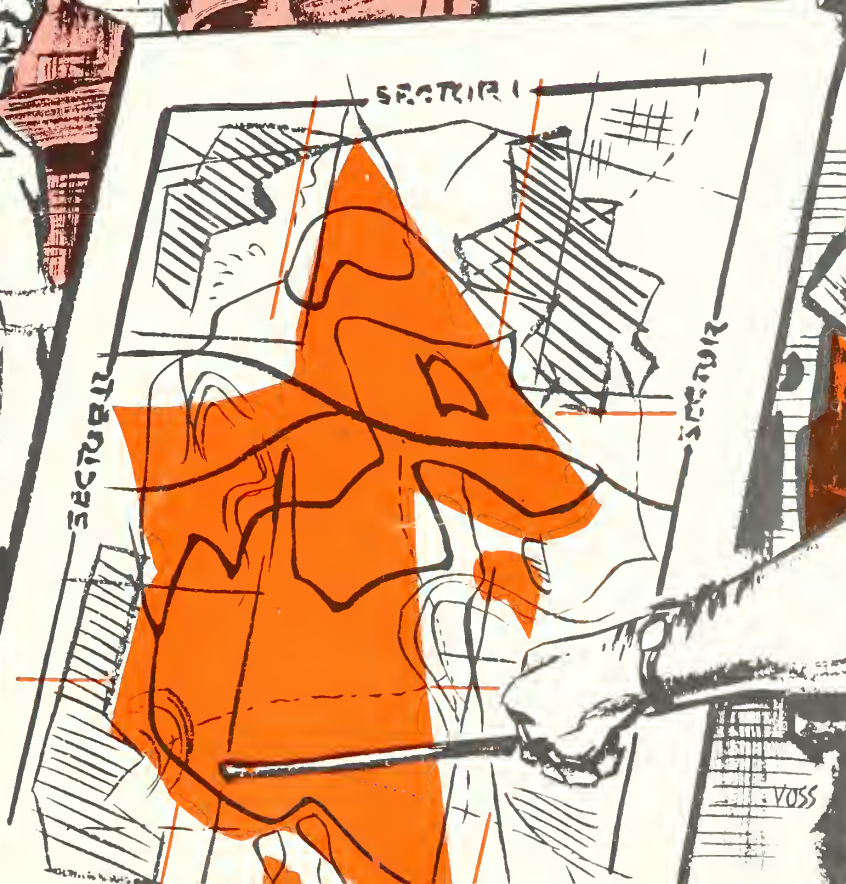
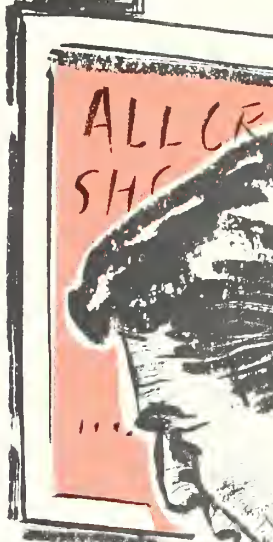
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Frank Craven
Editor

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Trash Fires Are Too Common

(From the *Daltonbega Nugget*)

Almost everyone in suburban and rural areas burn trash or leaves or derbis these days. And these folks are the ones who least expect to start a field or forest fire. Consequently, backyard burners often don't take the needed precautions; safety measures they'd take if they were burning off a field or forest floor. Thus, we have too many wild fires starting from trash burning.

The following precautions should be taken: First, don't burn on a windy day. When you do burn, use a safe trash burner, keeping the incinerator away from inflammable material, such as brush, grass or woodlands. Above all, stay around with the necessary hand fire fighting tools, such as rakes and water, until the fire is dead out. Fires sneak away from us when we leave the burning site for a minute to have lunch, answer the phone or get a glass of water.

Nature Receives A Needed Assist

(From the *McDuffie Progress*)

The stake McDuffie County citizens, and citizens everywhere, have in our growing forests has finally been recognized and now a long-range effort is being made to protect and expand this natural resource.

Mother Nature, in all her genius and mystery, cannot protect and expand our forests at the rate they are being destroyed by fire, poor management, and other faulty human practices which could be prevented.

The Forestry Plot, recently acquired by the McDuffie County Board of Education through the sponsorship of the Trust Company of Georgia, will go a long way towards helping to overcome the practices which in the past, have made our forests a vanishing part of the American scene.

The 9.9 acres of land near Thomson to be used in teaching agricultural boys at the local high school the fundamentals of approved forest management practices will help to insure future generations a plentiful supply of trees and their many products which go to provide a better way of life for us all.

'Plan Before You Burn'

(From the *Rome News-Tribune*)

Although it's been in effect two years now, Georgia's "Notification of Intent to Burn" law goes unheeded in many instances. This is the law that requires anyone planning to clear land, destroy brush, trash, etc., by burning, to notify the County Forest Fire Protection Unit.

When they know of such planned fires, Forestry Commission personnel are able to assist in controlled burning, advise on precautions and record fires to avoid confusion and false alarms.

As a result of careless burning so far this year, there have been 91 forest fires in Floyd County, burning over 1,365 acres. These fires still are under investigation.

The notification law is not intended to inconvenience property owners but, rather, to help them protect valuable forest resources. Its violation is a misdemeanor and persons found guilty of evading it can be fined up to \$1,000 and jail sentences.

But, fines and jail sentences are not what the Forestry Commission wants. The rangers want to avoid damaging fires and property loss to individuals and they're willing to help as long as they have public cooperation.

Take their advice: "Plan before you burn and call the Forestry Commission office."



Training School Starts Forest Survey

of the group is in charge of the general planning of the work, directing crews from one temporary headquarters to another, assisting the field supervisor in follow-up training, obtaining ownership data and editing field records.

The survey, conducted by U. S. Forest Service personnel, with additional backing of the Georgia Forestry Commission, Research Council and Forestry Association, is a two year project that will cost more than \$300,000. The Forest Service will contribute \$209,000 and the Forestry Commission and Research Council \$50,000. Industry is expected to provide an additional \$44,000. The supporting organizations have the choice of furnishing men or money.

The inventory, scheduled to be completed in 1961, will enable a measurement of trends in land use and timber by size, species, and types of timber on



Old plot location pen-pointed by survey crew

A survey of Georgia forest resources was started in August with a two week Forest Survey Training School at Camilla. Mackay B. Bryan of the Southeastern Forest Experiment Station, U. S. Forest Service, Asheville, North Carolina, who is in charge of the inventory, conducted the school.

Personnel were given instructions for establishing sample plots and collecting and recording field data. Definitions of terms and the specifications for various tree and plot classifications as well as becoming familiar with field organization, equipment, and safety problems were covered in the two week session.

The cruising will be done by one or two man crews consisting of a chief and a measurer. The survey crews work in groups of two or more crews. The crew chief

various sites to be compared with the last forest survey, held in 1951-53. The inventory is divided into five geographical units: coastal plain, one and two; Southern piedmont, three; Northern piedmont, four; and mountains and foothills, five.

The southwestern section of the coastal plain has been designated as the starting point with the southeastern section of the coastal plain slated to be surveyed from December 1, to July 1, 1960. Rounding out the inventory schedule, is the Southern piedmont, July 1, 1960 to January 15, 1961; Northern piedmont, January 15 - May 1, 1961; and the mountains and foothills, May 1 - August 1, 1961. The published report will be released four months after completion of the field work.



Witness tree marked, measured for future reference

Seed

Tree seed from the Great Lakes to the Gulf of Mexico are being tested for quality and growth rate at the brand new Region 8 Tree Seed Testing Laboratory of the U. S. Forest Service at the Georgia Forestry Center.

T. F. Swofford is director of the \$210,000 brick, glass, and steel building which was financed three-fourths by federal funds and one-fourth by the state. Dr. M. C. Carter of the USFS heads seed research at the new installation.

The state-federal co-operative operation is financed entirely from the seed testing charges, which are held to an absolute minimum, Swofford said. The customers are billed at the end of each year according to the cost divided by the number of test made. In the past, this has averaged out to \$12 per test.

The seed tests have increased from 100 in 1954 to 1,105 in 1957, Swofford said, estimating that 70 percent of the entire current tree seedling production in the United States was drawn from data furnished by the lab. The lab, which runs tests on all species of pine, in addition to twenty different conifer species, expects to run 1,100 seed tests in 1959-60. In comparison, 834 tests were

Research Laboratories

Technicians Offices



Technicians studies mean better forests for the future

Seed growth observed in refrigeration unit

Seed are dewinged, separated by weight

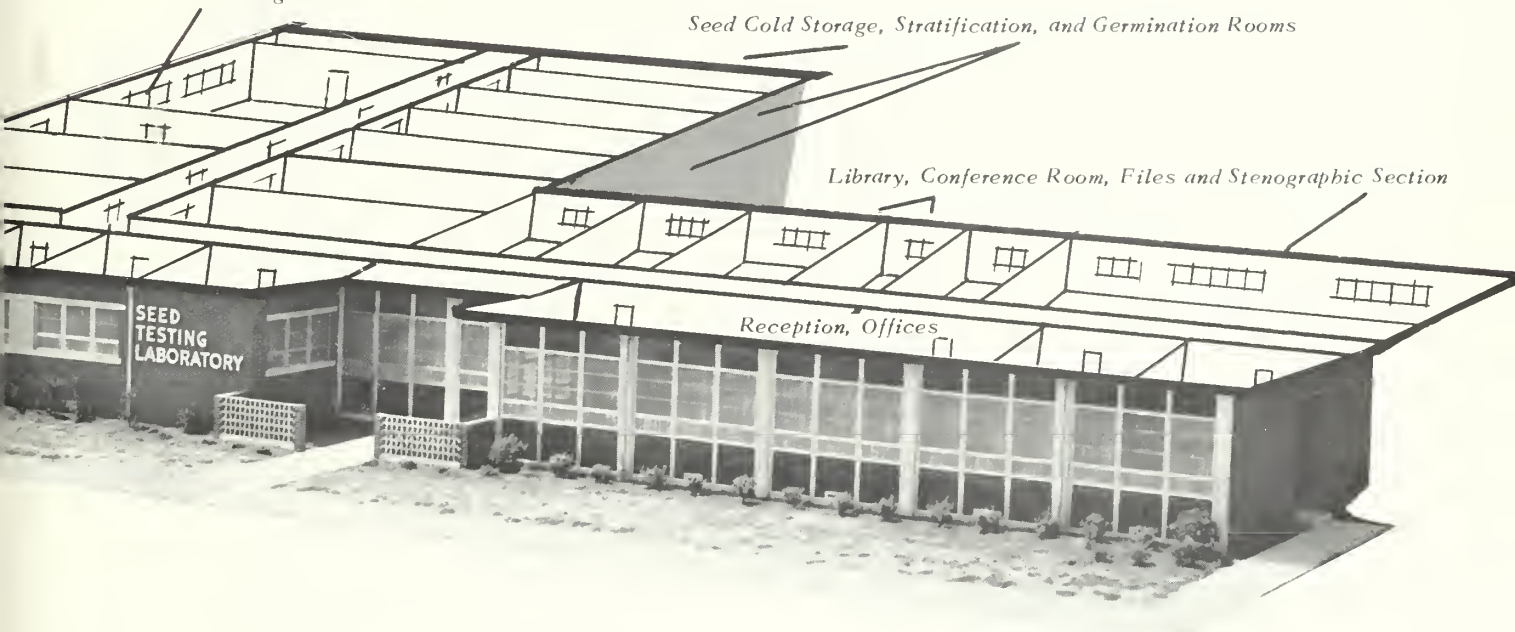
Laboratory Serves Eastern U. S.

Seed Testing Laboratories

Seed Cold Storage, Stratification, and Germination Rooms

Library, Conference Room, Files and Stenographic Section

Reception, Offices



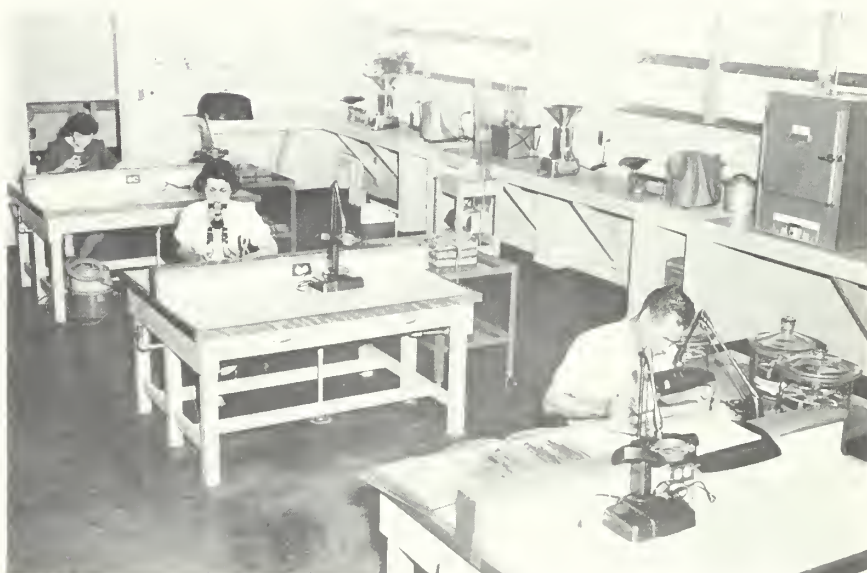
made in 1958-59. The new lab has facilities for testing 1,700 seed lots simultaneously.

Swofford added that the reduction in tests last year was due to the overproduction of seed in 1957.

Physically the lab has a service testing and research lab; two cold storage rooms, one for breaking seed dormancy and one to store samples for future study; five germination rooms; and a delicate instrument, storage, equipment and service testing finishing rooms. A chromatography room, where the chemical make-up of any substance used, by sensitized paper, can be discovered, will be ready in about three months. Offices and a reception room are included in the lab.

Under controlled conditions, tree seed are tested at the laboratory to determine the quantity and quality of seedlings they will produce when planted in the field. Tests reveal the density that seed must be planted to get the number of seedlings desired per nursery bed; percentage of germination; purity percentage; number of seed per pound; moisture content; and full seed percentage.

The basic research conducted at the lab gives the technicians the reasons for certain reactions but are not for specific application. At present, research is



New facilities enable technicians to test 1700 seed lots simultaneously being carried out on testing and comparison of nursery field techniques, methods of breaking seed dormancy, control of insects in relation to seed, seed and cone handling storage, seed extraction methods, and bird and rodent repellent treatment.

Swofford indicated that the lab would be testing all coniferous seed for the eastern half of the U. S. within five years. At present, Arkansas, Florida, Georgia, Illinois, Kentucky, Louisiana, Michigan, Mississippi, South Carolina and Tennessee utilize the lab's facilities. Maine and New Hampshire have already indicated their interest in using the new facilities as well as new seed customers which include direct seeders, new seed dealers, and state nurseries in Tennessee, Illinois, and Michigan.

With the up-swing of Georgia forest fire losses in 1959, Georgia courts, through public demand, have begun to clamp down on fire law violators, according to Bob Gore, Chief Investigator for the Georgia Forestry Commission.

Gore added that this is the first year that fire violators have been prosecuted under the Notification of Intention to Burn County Option Law. The law was passed by the 1956 General Assembly.

Through July of 1959, district law enforcement officers made 42 cases; in which there were 25 convictions. In addition, there are 31 cases pending action. Of the total cases, ten were in violation of the 'no burn law.' Four of the convictions were connected with the 'county option law.' The maximum sentence given was eighteen months to a Gilmer County man for maliciously setting fires. Another man was fined \$200 in Appling County for violation of the Notification to Burn Law.

Gore stated that with the fall fire season upon us, all means will be used to cut down a repeat of the fire losses suffered this spring through carelessness and malicious burning.

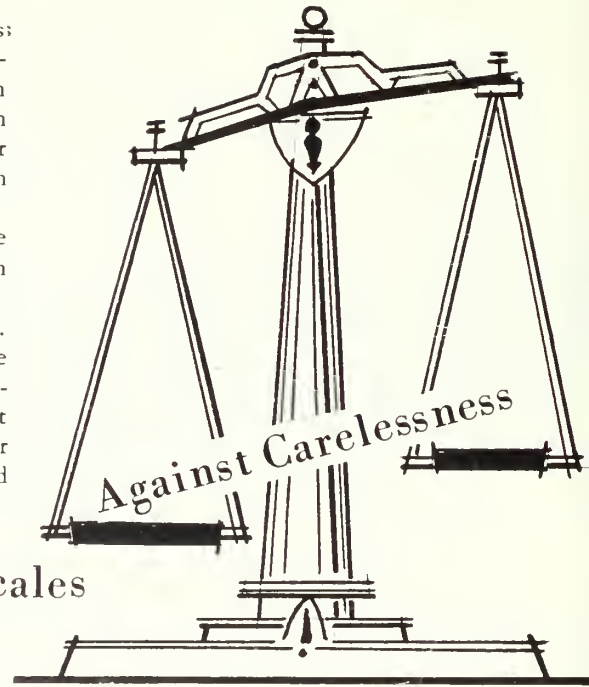
As of August 1, there were 148 counties under forest fire protection. Of these, 90 counties had passed the 'no burn law,' while initial passage by the grand jury effected six counties and is pending action by the second grand jury before becoming law. There are 52 other counties that are expected to receive the law for passage for the first time in the near future. The law is intended to prevent forest fires which might be started by uncontrolled burning for clearing lands.

Safety, Law Enforcement Programs Tip Scales

The Georgia Forestry Commission's vehicle and accident and injury frequency rate is well below the National Safety Council average for the trucking industry and all industries respectively.

Forestry Commission Safety Officer, Curtis S. Barnes, said the 1958 Commission accident rate, number of accidents per 100,000 miles driven, was .64, as compared to 1.50 for the National trucking average. Barnes stated that the Forestry Commission vehicles were involved in 29 accidents, covering 4,552,868 miles driven.

The National injury frequency rate average, number of working days lost per 1,000,000 hours worked, was 740.0 as compared to 89.6 for the Commission. There were 72 injuries, 28 of which were disabling, in 1,769,004 working hours, for comparison, the lumbering industry had a



rate of 2826.0, and the communications industry, the low score of 70.0.

The tenth district led in the number of vehicle accidents with seven and the eighth district in the number of injuries with 15. The best accident record was made by the third district with one. The sixth, seventh, and ninth districts had the least number of injuries with four each.

Tree Farm Prestige Escapes to Florida

WANTED. . . .279,430 acres more to be placed in the Georgia Tree Farm Program by December 31, 1959.

REWARD. . . .A better Georgia Forestry Program. . .Beat Florida out of first place. . .Regain our lost forestry prestige.

Erle T. Newsome, Jr., Chairman of the Georgia Tree Farm Committee, states that Georgia is now playing second fiddle to Florida in their race to put 5,000,000 acres in Tree Farms by December 31, 1959. Florida has 4,916,459 acres to Georgia's 4,720,570 acres. During 1959, Florida has gained 65,000 acres in the farm race.

Newsome adds that there are countless Georgia farmers who are not receiving proper recognition. If your crop is trees and you are protecting your woodlands from fire, over-grazing, insects and disease; following practices in harvesting trees that will assure continuing production of

commercial forest crops; and planting trees on idle acres and lands not suited to other crops; you are a Tree Farmer, Newsome said.

The words 'Tree Farm,' when applied to a piece of privately-owned forestland means the landowner has been publicly recognized for doing an outstanding job in managing his woodlands for the continuing growth of forest crops for commercial purposes.

For woodlands to be certified as Tree Farms, they must be inspected by a qualified forester and approved by the Georgia Tree Farm Committee. If the woodlands are not up to the qualification set up by the Committee, the qualified forester will advise the landowner on the proper steps to take to bring his farm up to the standards set.

The Tree Farm Program in Georgia is operated by the Georgia Forest Industries Committee and sponsored by the American Forest Products Industries, Inc. The Georgia Forestry Commission and other government agencies operating forestry programs within the state give their full cooperation.

Given Seed Computer

INTERNATIONAL RECOGNITION



A Georgia-developed tree seed planting computer received international recognition this summer at the 12th International Seed Testing Convention in Oslo, Norway. The computer is used to figure the number of seed which must be planted in tree nurseries to get the number of young trees desired.

A United States delegate presented the Swofford Tree Seed Computer to the global meeting. The computer was developed at the U. S. Forest Service Region 8 Seed Testing Laboratory at Macon by Lab Director Thomas F. Swofford.

The computer, adjusted to the needs of the tree species commonly produced in the Southern United States, is already in use in the South. Swofford is now developing additional scales which can be applied to species which have varying numbers of seed per pound.

Nurserymen tell the seed lab the tree seedling density and survival they want in their nursery beds. The seed analyst, with the use of a seed counter, plants 100 seed of the species in question in a foot square, soil-filled plastic container.

The seed are then watered and allowed to grow. The growth results provide information on seed germination, purity, size and survival. The information is then entered on the circular slide rule for final, large-scale computation.

The computer has fixed inner and outer scales and ro-



Information for computer provided by seed growth data tating dials on which the germination, purity, survival and seed percentage information is entered.

Swofford said that the new scales, being designed for the Northern and Western species, will be able to measure seed that range from 200,000 to 400,000 seed to the pound. The Southern seed range from 11,000 to 25,000 seed per pound. The major change in the scales will be in the seed per pound dial where the seed will also be measured in ounces. All other dials will remain the same.

Southeastern Forest Fire Compact Commission personnel from eight southern states conducted an emergency forest fire fighting exercise near Eatonton August 17 - 20. The states included Alabama, Florida, Georgia, Kentucky, Mississippi, South Carolina, Tennessee and Virginia.

Commission personnel from the Macon headquarters, all ten district offices, numerous county forestry units, and federal personnel battled a simulated 10,000 acre forest fire on private and Federal Land Utilization Project property in Jasper, Putnam, and Jones County.

Emergency field headquarters were set up on the LU Project approximately ten miles southwest of Eatonton. The men slept at the Rock Eagle 4-H Center near Eatonton and ate there or at a field kitchen set up at the 'fire' scene.

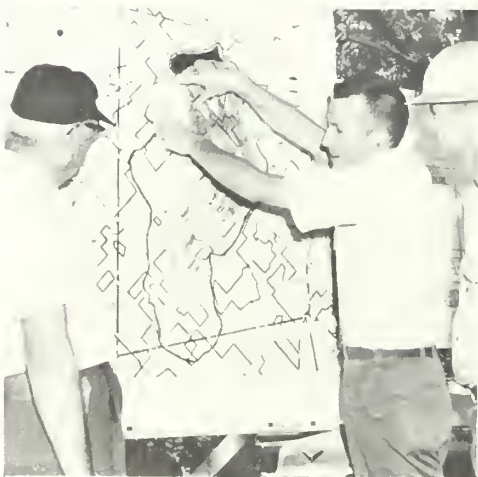
Simulated problems, such as spot fire, equipment failures, and personnel injuries were thrown in to block the efforts of the fire fighters in putting the 'blaze' dead-out. However, more than 180 men, 50 trucks, 14 fire suppression tractors and four aircraft were enough to overcome the hazards.

The men were able to keep pace with the 'flames' that at times endangered farm homes and buildings, through the efforts of scouts and air lift operations. Scouts, furnished by the USFS Headquarters at Hillsboro, led the fire crews who were unfamiliar with local terrain, to vantage points on the 'fire line.' The fact that these crews were able to cope with the problems as they arose, was attributed to the air-life operations which provided food, fuel, tractor parts, and specialized tools as they were needed. Helicopters were also used in removing the injured.

Attack plan discussed as field personnel are equipped for battle



Southern States Attent





Efficient communication system dispatches prompt aerial aid to 'injured' firefighter

Cold Fire Exercise



The 'fire' problem, which began as an average 'fire' flare-up and ended with blow-up conditions, started near Willard about six miles west of Eaton. When discovered, the 'blaze' had developed into a 100 acre 'fire'. Unfavorable weather conditions and the head start of the 'fire' (investigation proved that the 'fire' was started by illegal deer hunters who were hunting at night and out of season) prevented county unit personnel from bringing the 'hot' flames under control. District equipment arrived on the scene with 300 acres destroyed and high winds making applied control methods ineffective. The need for all available state equipment was seen immediately as the 'blaze' developed into a 'blow-up' fire. The elements, breakouts of new fires, and equipment failures necessitated putting out a call for help from other southern states to bring the blow-up 'fire' under control.

After the last smoldering ember was put out, it was estimated that 10,000 acres of timber had been destroyed in addition to the loss of wildlife and destruction of the soil which is immeasurable in dollars and cents.

Commission equipment included three air patrol planes, the TBM fire retardent chemical bomber, a helicopter, numerous two-way pack radios, 25 trucks, nine fire suppression tractors and their transport trucks, one field kitchen, a bus to carry observers and other maintenance equipment. Florida provided the mobile fire headquarters, a power wagon tanker, and a light tractor unit. South Carolina furnished three light tractor units. Alabama provided two light tractor units.

S. D. Beichler, USFS, Atlanta, and co-ordinator of the entire SSFFCC program was chief umpire. Commission Fire Control Chief J. C. Turner, Jr., Macon, served as fire line boss on the exercise. Lester Lundy, Commission General Services Chief, Macon, was service boss. Curtis Barnes, Commission Assistant Fire Chief, Macon, was service umpire.



Industry provides increasing market for low grade, pulp-size hardwood; stimulates interest in hardwood management

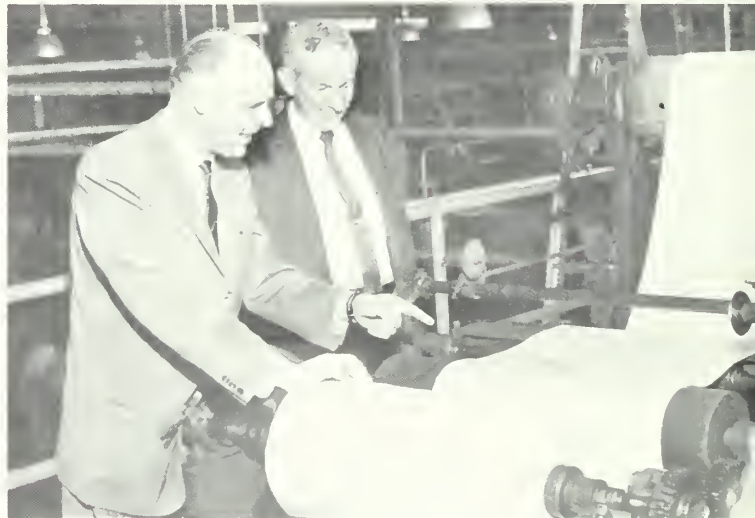
Hardwood Management A Must For Full Forest Production In Georgia

By W. H. McComb

Georgia's 'forest factory' is operating at half throttle because her hardwood resources have not been properly developed. With 57.7 percent of the commercial forest land in pine production, hardwoods have been left to produce without man's help.

Outside of the National Forests, selectively marking hardwoods for harvesting and other good forestry practices have been almost non-existent. Years of removing the best quality trees and leaving low grade or cull trees have reduced most of Georgia's high yielding hardwood area to producing high yields of low value or worthless hardwood. In some cases, it will be necessary to completely regenerate the stand.

The lack of a market for low quality and pulpwood-size



Ainsworth, Belvin see brighter hardwood future through development of hardwood newsprint at Ilerty Laboratories

hardwood probably has been the greatest drawback to good hardwood management. A landowner is usually willing to improve his pine stand by removing certain low quality or over-crowded pine when it can be done profitably. However, he is not so willing to invest five to fifteen dollars per acre in removing undesirable hardwoods to improve his hardwood stand in order to realize a profit some years hence. This is not unusual as there was also not much pine management being practiced until the advent of the use of pine for pulp and paper. With seven percent of the pulpwood production in the state last year being hardwood and increased use in the future being almost a certainty, there should be a boom in the management of hardwoods.



Manufacture of ski bolts is one of many varied uses of high quality Georgia hardwood.

The key to growing hardwoods profitably is to grow high quality trees of a merchantable species. In any business, the higher quality products reap the higher prices. However, this is truer in hardwood than in pine. The best grade of hardwood is worth much more than the best grade of pine, but in most cases there is no market for low grade hardwood.

Georgia has almost 250 species of trees of which all are hardwood except fifteen. The many species of hardwoods have such a variety of wood properties that they are most versatile in their usage. Different from pine is the fact that usually slow growing, close grain pine produces the best quality wood whereas the faster the growth of hardwood the better the quality of wood.

Good quality, fast growing hardwoods are more exacting in their requirements of moisture and soil, although some species of hardwood will survive and exist under the poorest conditions.

Fortunately, there is no conflict of pine versus hard-

wood as each requires its particular conditions of site. In general, areas which will grow high yielding, good quality hardwoods such as moist, but well-drained bottomlands and coves should be managed for hardwood. All other areas should be managed for pine.

The best way to find out what should be grown for the greatest economic return is to get the aid of a private consultant or of a public forester.

Although there is some good research being done on how to grow and utilize hardwoods, there is a lot to be learned. The development of hardwood newsprint by the famed Herty Foundation at Savannah opens a new field for several heretofore valueless Southern hardwoods. The foundation also has under study for the conversion to pulp hackberry, elm, willow, and various gum species. However, if Georgia's forest owners wood use what is already known about growing hardwood, Georgia's largest producing plant, its forest, could begin operating at full blast.



Hardwood markets leave opening for future growth



More high grade hardwood needed in Georgia forests

An 'open air' pine cone holding shed has been constructed by the Georgia Forestry Commission at the Forestry Center to improve cone curing operations, Commission Director, Guyton DeLoach announced.

The completion of the 35,000-bushel-capacity building centralizes all pine seed processing at the center and should result in higher quality seed for Commission tree nurseries, DeLoach said. The pine cone drying kiln and pine seed extractor plant are located next to the shed.

the seed to maintain high germination potential.

The cone drying kiln can process all cones collected, but not at the rate the cones are delivered. The cones are collected from Middle and West Georgia. The kiln dries at the rate of 30,000 bushels per month. The cones not being dried in the kiln will be placed in wooden, wire bottom racks in the shed. The racks, which have a capacity of six to eight bushels, will be stacked 12 high.

New Cone Shed Aims: Better, Cheaper Seed



The pine cone shed will eliminate the use of tobacco warehouses in Baxley, Vidalia and Statesboro and two older cone sheds at the Center. One shed will be given to the Georgia Forest Research Council and the other will be used to store cone collection field equipment. More than 5,000 racks, costing \$15,000, will be used in the \$27,000 shed. Commission Reforestation Chief Sanford P. Darby estimated that the new cone facility will save the state approximately \$10,000 annually in rent and personnel.

A fork lift operator, two laborers for loading cones into the cone racks and ten men, to operate the cone drying kiln and seed extractor plant are needed to man the 22,000 sq. ft. shed. Previously, the operation has required six to eight employees just to turn the cones to keep them from moulding, in addition to the above mentioned employees.

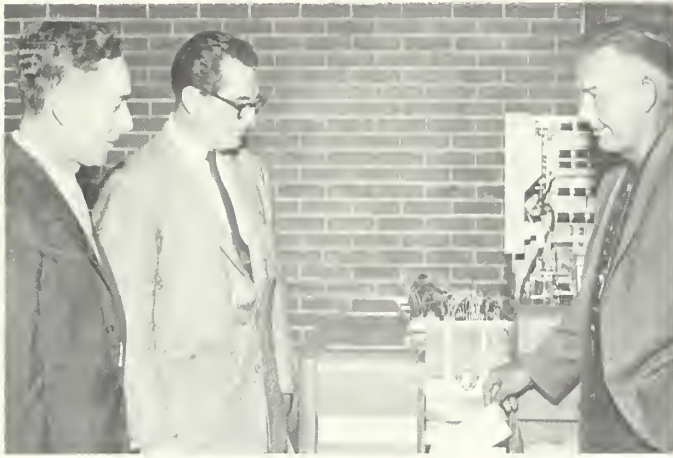
The open air storage shed enables cones to dry out more quickly than in the warehouses where cones hold 100 percent moisture over long periods of time. This causes a germination loss up to 16 percent in four months. Less handling and faster kiln drying operations will enable

Darby said approximately 50,000 bushels of cones, 40,000 slash and 10,000 loblolly, will be collected by contractors chosen on a bid basis by the Reforestation Department.

At present, the Commission has 116,282 pounds of seed, three year supply, provided that 250,000,000 seed are planted per year. Darby stated that it is necessary to keep a large supply on hand since pines do not produce a cone crop every year.

The contractors are J. W. Cullens, Vidalia; Ernest Hinson, Baldwin; and Tom Reimer, Albany. The cone collection area is divided into seven zones. Zone one includes Emanuel, Jenkins, Candler, and Bullock Counties. Zone two is Toombs, Montgomery, Treutlen, and Wheeler. Zone three includes Dodge and Laurens Counties. Zone four consists of Coffee, Wilcox, Ben Hill, Irwin, Telfair, and Jeff Davis Counties. Zone five is Troup, Meriweather, Pike Heard, Coweta, Carroll, and Fulton Counties while zone six includes Putnam, Hancock, Jones, Baldwin, Washington, Bibb, Twiggs, and Wilkinson. Taylor, Marian, Sumter, and Schley Counties comprise the seventh zone.

Aultman Selection Heads Roster Changes



Aultman, Sessoms, DeLoach watch IBM in action

Andrew J. Aultman, prominent Worth County landowner and farmer, was recently named to the Georgia Forestry Commission by Governor Ernest Vandiver,

A native of Sylvester and a life-long resident of Georgia, Aultman graduated from Mercer University and also obtained an LLB degree from the Macon school. A member of the Georgia Bar Association, he has devoted his life to managing his family's property in Worth and Turner Counties.

Rufus H. Page, wood technologist for the U. S. Forest Service and the Georgia Forestry Commission, has been promoted to Assistant Chief of the Division of Forest

Utilization Research, Southeastern Forest Experiment Station, Asheville, N. C.

Paul Bois, technologist with the Southeastern Station, succeeds Page. Bois, a graduate in wood utilization from Michigan State, worked at the Forest Products Lab in Madison, Wisconsin for over five years in gluing, laminating and wood particle board research.

At the Forestry Center, William Kellam, former Commission I & E Assistant, is now Assistant Public Relations Officer of Bowaters Southern Paper Corporation, Calhoun, Tennessee. Former Reforestation Assistant Roy S. Cole became the Clarke-Oconee County Ranger. Former Washington district radio technician Albert Young is now with the Georgia Game and Fish Commission. Past Coffee-Atkinson County Ranger trainee Walter R. Batchelor is Assistant District Forester Management at Waycross; while Lowndes County Ranger II trainee Bennie B. Brant is now Assistant District Forester Fire Control at Milledgeville.

New county rangers include Rowe T. Wall, Randolph; Coke E. Rogers, Houston; Morgan Gary Rogers, Glynn; Terrell Brooks, Fulton; Robert Paulk, Ware; Archie R. McEuen, Liberty. All six are University of Georgia graduates. Eugene Dockery is a Ranger II trainee in Consolidated TPO. He attended Western Carolina College in North Carolina.

Two former rangers, Robert B. Hellams, Jr. and Leo W. Lorenzo have rejoined the Commission at the Waycross District Office and Lowndes County respectively.

Improved Ag-Lumber Practices Are Goal Of Fall Conferences

Conferences aimed at keeping Georgia in the forefront of the agriculture and lumbering industry are being held throughout the state. The more recent ones dealt with soil and water conservation with additional meetings in the fall scheduled on new developments in the lumbering industry.

The Georgia Forestry Commission has pledged their support to the Georgia Association of Soil and Water Conservation in bringing about a more effective Soil and Water Conservation Program, announced Commission Director, Guyton DeLoach.

T. G. Scott, Jr., president of the Association, stated they had no funds in which to aid farmers in applying good conservation practices to their farms. It is only through the cooperation of other agricultural agencies that the application of proper soil and water conservation principles can be applied to the farms of our state, Scott said.

Representatives of eight agricultural agencies were members of a panel that appeared recently in the five Soil Conservation Districts to discuss the co-ordination of all agricultural agencies toward an effective

Soil and Water Conservation Program.

The agencies included the Agricultural Extension Service, Georgia Forestry Commission, Agriculture Stabilization and Conservation, Vocational Agriculture, Farmer's Home Administration, Georgia Game & Fish Commission and Georgia Experiment Stations.

Sawmill conferences to acquaint sawmillers with new developments in machinery and seasoning of lumber will be held at five Georgia Lumber companies in October, announced Rufus H. Page, Forest Products Technologist, Southeastern Forest Experiment Station, Asheville, N. C.

The meetings are tentatively scheduled for October 13 Thompson Lumber Company, Ailey; 14, Mathis Lumber Company, Twin City; 15, Del-Cook Lumber Company, Adel; 20, J. S. Gainer Lumber Company, Covington; and 21, Addison-Burt Lumber Company, Washington.

Forced air drying's place in an intergrated operation, economic implications and limitations of chip saws and what they are, air-drying practices that reduce degrade losses, and sawmill care and maintenance will be discussed.

The subjects will be presented by Page; Paul J. Bois, technologist for the Georgia Forestry Commission and the U. S. Forest Service; J. T. Griffin, Wells-Griffin Lumber Company; Bill Bridges and Lawton Holland, Simonds Saw and Steel Company; Parks Brewer, Buckeye Cellulose Corporation; and Joseph R. Saucier, technologist, Georgia Forestry Commission and U. S. Forest Service.

A tour of the host mill will conclude each conference.

Forestry Administrator... 'Chute Rigger



Bishop repacks used 'chutes

"Say, rigging those parachute shrouds looks mighty complicated. You must be an aircraft mechanic."

"No, I just do this to help the Fire Control Division. I'm in business administration."

The above exchange is true. George Bishop, Chief of

the Administration Division of the Georgia Forestry Commission, is the unofficial chief of cargo parachute shroud rigging at the Georgia Forestry Center.

Forestry Commission cargo parachutes rigged by ex-paratrooper Bishop have dropped food and supplies on actual fires and Forestry Commission training exercises.

Bishop parachutes were used this month on the big South-wide emergency forest fire problem in Putnam County. Food, water and supplies were dropped to forestry personnel on the simulated 'fire' line.

The use of cargo drops from light fixed wing aircraft or helicopters speeds the delivery of necessities to points which cannot be reached easily by vehicle or on foot.

Bishop learned his parachute rigging during World War II as a member of the 82nd Airborne Division. He served in North Africa as a chief warrant officer, after receiving his basic training at Fort Benning.

Fire Control Chief, J. C. Turner, Jr., asked Bishop to take over the 'chute' rigging, which he has done, thus saving the state the considerable sum that commercial rigging would cost.

Divining Rod Takes To Water Like Duck

Satellites and geiger counters have made the Twentieth Century the Technological Age, but all man's mechanical achievements haven't replaced, or explained, the diving rod.

Greene-Taliaferro County Forest Ranger, H. E. Moore of Greensboro, is an exponent and practitioner of this ancient method of locating underground water. He has located water at his home and forestry unit, at the Oglethorpe Forestry Unit, and at other points in Greene County.

Moore, who learned the art from the late Herbert Graham of Greene County, is going to find water for two other Tenth District Units - Columbia and Lincoln.

Rangers Lonnie Morris and Bill Partridge have asked Moore's aid after witnessing an impromptu demonstration of his talents recently at the Richmond County Forestry Unit.

Moore cut a forked stick from a wild cherry tree, sharpened the end to make a point and grasped an end of each prong in each hand. He held the branches tightly with his palms up. His thumbs pulled against the ends of the fork to push the prongs open.

Then Moore walked about the grounds of the forestry unit, holding the branch straight out. Suddenly the point moved downward. It kept dropping until it had described an arc of 90 degrees and pointed straight at the ground. "Do it again," a skeptic insisted.

The doubter placed his hand under the point and felt the rod pushing down. Moore's hands were not moving.

After the point had moved down again, Moore opened his hands. They were red from the pressure he exerted



Morris, Partridge watch Moore and divining rod at work

on the prongs, yet white streaks showed on his fingers and both palms from the friction of the turning prongs.

Moore said that three dry wells over 100 feet deep had been drilled at the Oglethorpe Forestry Unit before he went over and 'divined' water on the first try.

Oglethorpe Ranger John Buckman of Lexington was already a believer in 'divining' because his father used the method successfully long ago. Moore said that Mr. Graham found countless wells in Greene County.

Moore can't explain why he has the 'power' and others don't. Mr. Graham told him it was a matter of 'believing.' There are plenty of scoffers around, but none of them can explain the stick's movement or the subsequent discoveries of water.

CAN YOU?

Logging the foresters...

ACHIEVEMENT AWARD. . .The Reigel Textile Corporation has been awarded a certificate of outstanding achievement in reforestation and fire control by the Chatooga Co. Forestry Unit of the Georgia Forestry Commission. The award, was presented to Reigel's Farm Manager L. C. 'Sadd' Dalton by Ranger J. B. White. Since the planting of 90,000 acres, in the 1954-55 season, the reforestation program has grown to 1,175 acres growing some 1,200,000 trees.

GEORGIA TOPS IN PULPWOOD....Georgia led the South in pulpwood production in 1958, producing 3,861,000 cords of roundwood and 232,000 cords of residue. Alabama was a distant second, producing 2,500,000 cords. Georgia's Camden, Ware and Wayne Counties were three of the seven counties and parishes in the South producing more than 100,000 cords each in 1958. Pulp officials hailed the increasing use of wood residue as pulp material, pointing out that 10 percent of the wood used in 1958 came from waste material which was formerly burned or discarded.

RESEARCH CONSOLIDATION. . .The Cordele Research Center and the Athens-Macon Research Center have been consolidated, announced Joseph F. Pechanec, Director of the Southeastern Forest Experiment Station, Asheville, North Carolina. W. A. Campbell is leader of the combined installation now called the "Macon Research Center." Frank Bennett and Ralph Peter are program leaders in charge of the "Cordele Branch" and "Athens Branch" respectively.

JOINT MEETING. . .Ben Meadows, owner of the Ben Meadows Company, Atlanta, was elected president of the University of Georgia Forestry School Alumni Association at a joint meeting with the Georgia Chapter of the Society of American Foresters in Savannah. Other officers are J. D. Strange, U. S. Forest Service, Atlanta, vice-president, Sam Thacker, Georgia Forestry Commission, Macon, secretary-treasurer.

'NO BURN' MATCHES. . .The lethal match, enemy of our forests, will be put to good use in 1960. The Richmond County Bank, Augusta, will provide its customers with match folders bearing a forest fire prevention message, announced Bank President Barney Jordan. Richmond County Ranger T. M. Strickland said he hoped that Richmond Countians would strike a blow against forest fires in addition to lighting up their favorite brand.

PROMOTIONS. . .Norman R. Hawley, Research Center Leader, Southeastern Forest Experiment Station, Cordele, has been named Program Supervisor of the Naval Stores Conservation Program in the southern states. Hawley succeeds John W. Cooper who has been named Forest Supervisor of the Texas National Forests, Lufkin, Texas. Regional Forester J. K. Vessey, U. S. Forest Service, made the announcements.



Georgia Forestry Commission secretaries recently received schooling on operation of IBM equipment at the Forestry Center. The girls witnessed the reams of information being compiled all on one sheet of paper.



Commission planes and helicopters recently took to the air to fight a different kind of fire - rubberfire made by motorists burning up Georgia's highways. Eight planes and two helicopters helped the Highway Department spot speeders during a weekend "Safetython" sponsored by the Georgia Association of Broadcasters.



Baron Alain de Jamblinne de Meux of Belgium, right, watches the conclusion of germination tests at the Seed Testing Laboratory. Tom F. Swofford, head of the laboratory, sees results of the tests with the Belgian geneticist.

SEPTEMBER 1959



Pocahontas, Pines Save Smith

Shortly after Pocahontas saved John Smith's neck, pine trees saved his financial shirt. When backers of the Jamestown Colony threatened to call off the whole venture unless it showed a profit, Smith promptly sent them profits in the form of pine lumber. Protect your forests, manage them properly and they can be a profitable venture for you.

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Future Demand For Forest Products

(From the *Carnesville Herald*)

The outlook on future demand of forest products is for a 30 percent increase in demand is coupled with the anticipated increase in population.

The real importance of this trend is the ability of the Southern states to grow timber quicker than any other section of the nation. Considering a depletion of present stocks in the Western and Northern states, then the South's ability to replenish its forest stocks at a rate faster than other sections should make the South a prime source of sawtimber in the future.

The only drawback to this expanding demand of forest products is the present timber situation in Georgia.

At present more pine sawtimber is being cut than is growing in our area; only one half of our forest stands are well stocked. Even this figure is misleading since a great many of our well stocked acres are growing poor quality hardwoods. Less than three percent of Georgia's forest area is well stocked with sawtimber. The high quality gums and yellow-poplar 20 inches and larger are being cut more than twice as fast as they are being replaced by growth.

The last forest survey figures on restocking with pines estimated 1.4 million acres of poorly stocked forest land without enough seed trees to assure prompt restocking.

Each year cutting converts 180,000 acres of pine and oak-pine types to hardwood types.

Coupled with poor cutting practices, poor stocking, and poor hardwoods, we have other destructive agents in the form of fire, diseases, and insects.

To improve cutting practices, stocking, and hardwoods, and to combat fires, diseases, and insects, then intensive forest management will have to be applied to our lands; especially if we are going to increase the quantity of our trees to meet future demands.

A Challenging Fire Report

(From the *Moultrie Observer*)

There is a way to halt damaging fires in the forests of Colquitt and other Georgia counties. The answer is simple, but effective. Common sense preventive measures can bring about a marked change in the forest fire losses, and the 1958 report released by the Fire Control Division of the Georgia Forestry Commission proves the point.

Thirty-six, or nearly half of the forest fires reported in Colquitt county last year, were traced to debris burning. Smokers caused 13 other fires, while hunters carelessly dropped cigarettes, failed to put out a campfire or dropped a match in the grass in 11 instances.

Incendiarists contributed eight fires.

The other seven fires were due to lumbering operations, pulpwooders and miscellaneous causes.

The conclusion, from this fire report, is obvious. Negligence and carelessness are directly to blame for most of the 717 acres which were burned over during the past year. Nearly as many acres - 678 to be exact - have already been burned in the Colquitt area since the first of January. The causes are principally the same as those which set so many wildfires in 1958.

Preventative measures are the one and only answer to the protection of the forests of Colquitt or any other county in Georgia with wooded areas. These timber tracts are valuable not only to the owner of the land but to the general economy of the state and county.

Be alert and careful with fire. Don't take chances. Otherwise, the dollars you burn in the form of forests may have found their way into your pocket through some customer or a payroll.

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On the Cover

Smoky Bear, in sending Christmas greetings across the nation, expresses hope that your trees, in 1960, will experience a fire free year. Only through the proper management of your forest can your trees escape this destructive menace. If you protect your forest, they will protect you by providing income and wood products in the future.

Member of the
Georgia Press Association.

Georgia Forestry is entered as second class matter at the Post Office under the Act of August 24, 1912.



Miss Hunt, Gov. Vandiver, Wallace Adams, and Miss Donnelly open fire lab

Governor Opens Forest Fire Lab

Governor Ernest Vandiver officially opened the nation's first major forest fire laboratory in ceremonies at the Georgia Forestry Center near Macon, November 4. The Southern Forest Fire Laboratory is expected to be joined by two USFS fire labs in the future.

Governor Vandiver stated that just last year Georgia landowners received approximately \$81,000,000 through the sale of pulpwood and \$100,271,000 from sawtimber. However, it is conservatively estimated that our forest land is only producing one-half its capacity. Instead of receiving \$750,000,000, we should be receiving one and one-half billion dollars annually, Vandiver added.

Georgia's governor concluded his address with the hope that through this fire lab, researchers would be able to find the answers needed in the fight against destructive forest fires. The new lab can well be the answer that we are looking for in our fight against uncontrolled forest fires, one of the worst enemies to Georgia's economy. The governor then cut the ribbon opening the new fire lab. He was assisted by Miss Beth Hunt, 1959 4-H Queen, Baxley; Miss Suzanne Donnelly, state public relations chairman for the State Future Homemakers of America, Milledgeville; and Wallace Adams, chairman of the Georgia Forest Research Council, Glenwood.

Earlier in the program, Dr. V. L. Harper, Assistant chief of the U. S. Forest Service in

charge of forest research stated that the opening of the lab is the key to new forestry horizons. He added that fire research will lead to more rapid and less costly fire control measures.

Master of ceremonies John W. Langdale stated that by supplementing state and federal agencies in conducting specific research projects, a most satisfactory research program is being conducted in Georgia at a much smaller cost to the taxpayers. Other participants on the program included Macon's B. F. Merritt, Jr., who gave the welcoming address; Downing Musgrove, who introduced the governor; and Georgia Forestry Commission Director Guyton DeLoach, who introduced Dr. Harper.

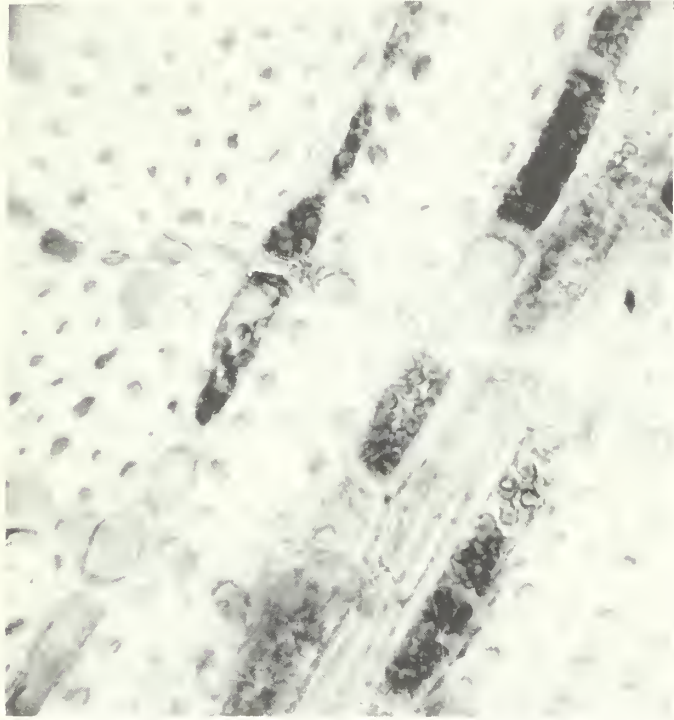
During the program the Fire Control Division of the Forestry Commission demonstrated the use of the TBM tanker in fire suppression. The aerial tanker had been used successfully in Northwest Georgia and Northeast North Carolina earlier this year.



Harper talk, TBM demonstration highlight opening.

Rapid Seasoning Answers Stain Problem

The rapid seasoning of sapwood lumber has been found to be the most effective control of chemical staining of southern hardwoods. Southern hardwood lumber manufacturers have been bothered by chemical stain for some time because it usually does not present itself until after final lumber surfacing in the plant. It also develops in chemically dipped as well as undipped sap-



Dark globules in ray cells are cause of chemical stain

1960 Nursery Plans Include Hardwoods

The Georgia Forestry Commission is incorporating certain hardwood species in its 1960 nursery program. This phase of reforestation is being added in order to meet the demands of a growing population and to provide quality products, according to Sanford P. Darby, reforestation chief for the Forestry Commission.

Darby added that many unproductive sites capable of producing quality hardwoods are not properly stocked. It is the opinion of forest economists that land growing potential must be utilized more intensively if forestry is to be upgraded and promoted as a more specialized profession.

Hardwood seed will be planted at suitable nurseries within the natural range of the hardwood species. The seed will be planted in about four to six rows or drills to a bed. Bald Cypress, a softwood, is the only exception as it will be

wood lumber.

A study of this stain has just been completed by Paul J. Bois, forest products technologist for the Georgia Forestry Commission and the U. S. Forest Service. Samples for the study were taken from hardwood lumber mills in North Georgia and North Carolina.

The gray-brown chemical stain is a costly problem in dimension lumber, flooring and specialty items requiring a bright finish. Species such as soft maple, hackberry, hickory, red oak, and dogwood have proved most susceptible to this stain.

The delayed presence of the stain is due to the rapid drying of the surface fibers. The wood beneath these fibers remains wet long enough to allow the chemical stain to develop.

The chemical stain, which is similar in appearance to blue stain, is not a fungus type. The chemical stain develops in hot and humid weather which produces poor drying conditions. Therefore the stain is more prominent during the late spring and summer months.

The difference between the chemical stain and blue stain can be identified by an acid test. T. C. Scheffer, of the Forest Products Laboratory, found that oxalic acid bleached out the chemical stain but not the fungus stain. When both chemical and fungus stain are present the results of acid application are negative, this indicates fungus staining. The acid test brings excellent results in hardwood lumber seasoning yards where blue stain fungus is not a problem.

Steaming, low temperature drying, forced air-drying, and immediate kiln drying are the only present means of controlling chemical stain.

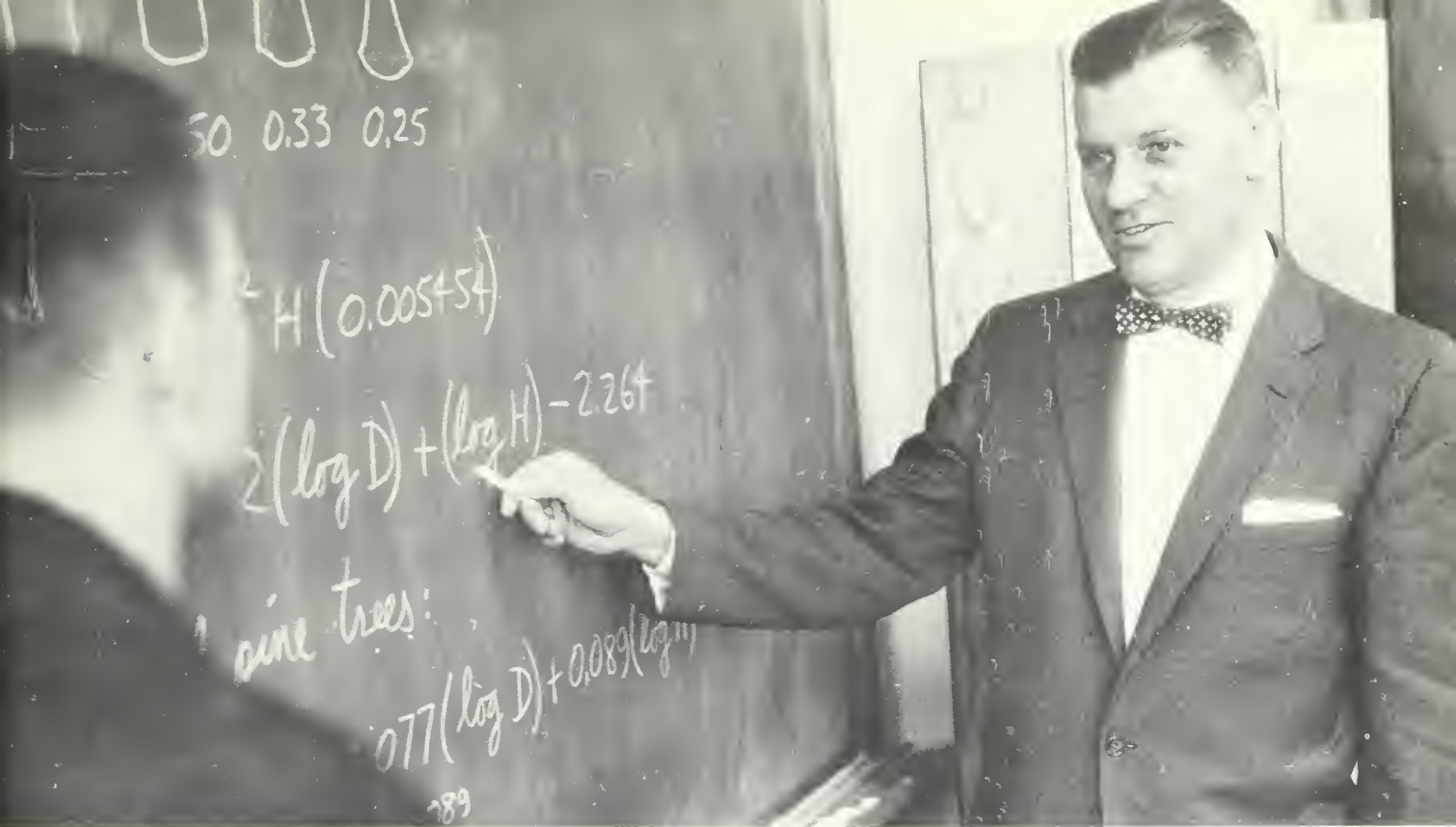
A report on this study will appear in a forest utilization service release in the near future.

planted in a manner similar to pine seed.

Approximately 10,000 pounds of hardwood seed have been collected. This figure does not include the collection of five and one-half bushels of Sweet Gum. Eastern Cottonwood will be collected between April and June of 1960. Other species that have been gathered include Cherrybark, Northern Red, and Swamp Chestnut Oak, White Ash, Sycamore, Flowering Dogwood, and Black Walnut. These species were selected on the basis of extensive investigations and analysis of industry demands.

Seed collection quotas have been fulfilled for the Dogwood, Sycamore, Sweet Gum, and Black Walnut species. Darby stated that there has been some difficulty in obtaining quality seed due to a poor seed crop.

The hardwood seedlings are slated to be released to the public in the 1960-61 planting season. The sales and planting instructions will be made available to the public in June of 1960.



New Curriculum Aimed At Future Leaders

A broader educational background is the aim of a newly proposed forestry curriculum drawn up by the faculty of the University of Georgia's School of Forestry in Athens. Dean A. M. Herrick stated that the new requirements give the student a more flexible curriculum, providing a wider choice of subject material. This will enable the student to broaden his education into other fields such as science, public administration, mathematics and the arts.

Fire control, timber cruising and tree planting will always be one of the responsibilities of the forester. However, the forest industry needs men who are able to assume responsibilities for planning, developing and managing forestry as a business enterprise.

Just last year more than \$750,000,000 were poured into the state's economy through forest industries. In the future the South is expected to provide the nation with the bulk of its timber products. Georgia is expected to contribute the largest proportion of these products. At present, Georgia leads the South, and is second in the nation, in pulpwood production and fourth in the production of lumber. Georgia also produces some 80 percent of the nation's naval stores.

For Georgia to continue leading in forestry production, it must produce leaders who are capable businessmen. The new changes that will take affect at the Georgia Forestry School in 1960 are pointed at the leaders of tomorrow. In order to give the forestry student a well-rounded education some 35 credit hours of required forestry courses have been eliminated. Eight courses were withdrawn from the curriculum and three others were reduced but will still be offered as electives.

More math, in the form of statistics; two communication courses, public speaking and technical writing; and physics, in connection with soil work, will now be required. Other changes include increasing the electives from 25 to 43 credits. These electives include technical forestry, non-technical forestry and other non-technical studies. A minimum of eight hours is required in each group. A maximum of 14 hours can be taken in forestry electives. The revised program will enable to study such electives as organic chemistry, business law, psychology, and social sciences.

Dean Herrick pointed out that through this more rigorous but versatile curriculum, the forestry school will be able, in most cases, to identify the potential graduate student by the sophomore year. This will enable the school to guide him in the field of study in which he is best suited. It will also eliminate the prospective graduate from having to take undergraduate courses that would not contribute to his future study.

The University's Forestry Dean added that the forestry school has an obligation to train men for the last ten to twenty years of their careers and not just the first five years. This obligation is made plain through the fact that, in 1957, 7,000 graduate foresters were employed by forest industries. Today, over 40 percent of the nation's 17,000 graduate foresters are employed in industrial forestry.

Dean Herrick further emphasized that we must train leaders for tomorrow. Forestry is still a young profession in the light of other accepted professions. This means that with every passing year there are changes that must be made in our educational facilities.

Specific Gravity Step Toward Superior Pine Tree Development



Cores are measured in determining growth

Since 1955, seed orchards have been established in Georgia by the Georgia Forestry Commission and the U. S. Forest Service in an effort to develop superior strains of pine trees. Cuttings from approximately 400 trees, with superior characteristics, have been grafted to root stocks in developing the seed orchards. The seed orchards are located near Cochran and Glenwood.

With the continued work in seed orchard propagation and the proposed work in tree breeding at the Macon Research Center, further investigations are being made of the selected trees. These tests should determine wood quality characteristics which relate to strength, pulp yield, and other wood properties. This summer a study was initiated to determine the specific gravity and percent of summerwood of the 400-plus trees.

The study will form the basis for further screening of the selected trees being used for propagation. Those trees found to have exceptionally high or low specific gravity, or having a uniform percent of summerwood will be used for further genetic tests.

In conducting this study, two increment cores were taken from each of the 400 trees. Each core was marked, identifying it by county and tree number. One core is being used to determine specific gravity and summerwood percent. The other core will be used for a later project to determine wood strength.

The specific gravity of each core is computed on the basis of green volume and oven dry weight of each five-year growth increment. Each five-year segment is identified by age, tree number, and county number. The specific gravity core segments are soaked in water for



Saucier identifies each five year segment by age, tree and county number

24 hours to assure green volume before summerwood measurements are made.

In preparing the samples for measurements one side of the core is smoothed and a differential stain is used to mark the boundary between springwood and summerwood. The summerwood bands are then accumulatively measured.

Joseph R. Saucier, forest products technologist for the Georgia Forestry Commission and the U. S. Forest Service, is in charge of the study.



Forestry Center Hosts

Foreign Foresters

A Soviet forestry exchange team recently viewed Georgia Forestry Commission and U. S. Forest Service installations at the Forestry Center near Macon. The tour was part of existing arrangements for the exchange of scientists between the United States and Russia. A forest management team from the U. S. visited the USSR in July of this year.

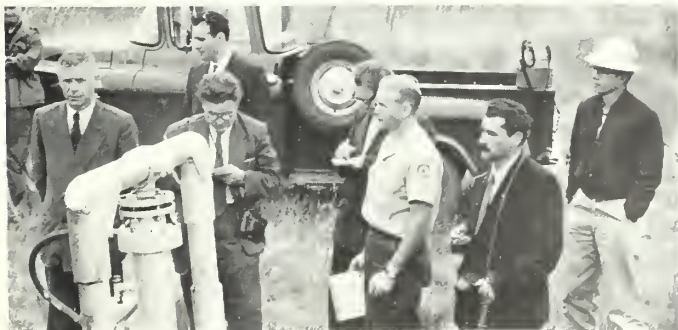
The five man team, headed by Dr. Valentine C. Nesretov, professor V. I. Lenin All-Union Agricultural Academy, Moscow, visited the nation's first major forest fire laboratory; a new U. S. Forest Service Seed Lab and insect and disease laboratories.

The group was given a demonstration of the Commission's fire fighting equipment, and cone curing and seed extraction methods.

The tour of the U. S. included Washington where the exchange team observed and discussed organization and policy of the Forest Service; the Middle West, with visits to the shelterbelt projects; and the west coast where they saw forest service research operations and national forest administration.

Other members of the forestry delegation included Alexei D. Buckshtynov, director, All-Union Scientific Research Institute of Forestry and Mechanization; Boris N. Luckyanov, chief of forestry section, Ministry of Agriculture; Alexei G. Grachev, chief of forestry section, Stalingrad Region; and Custav I. Zimenkov, Council of Ministers of the USSR.

Walt L. Dutton, USFS, was in charge of the exchange team tour. Boria Krowec, U. S. State Department, was the interpreter for the group.



Field equipment catches eye of Russian forestry team

Representatives of the Ontario Department of Lands and Forests toured the facilities of the Reforestation Division. The three man group, headed by R. W. Hummel, reforestation branch supervisor, was mainly interested in seed extracting facilities, nursery and seed orchard work.

Sanford P. Darby, Commission reforestation chief, showed the visiting Canadians the inside operations of the seed extracting plant and laboratory, and the Morgan Nursery, one of the six nurseries operated by the Commission. The team also viewed slides on nursery and seed orchard operations



Canadians discuss seed extractor operations

Hummel stated that the group was very much impressed by the facilities of the Forestry Center. He expressed hope that their department could put into practice some of the reforestation techniques and procedures that they observed during their visit.

The group had high praise for the close cooperation between the Commission, Research Council and the U. S. Forest Service. Other members of the party were C. H. Lane, tree production section head and W. E. Edwards, seed extraction superintendent.

Fire Lab Hunts Cure For 'Blow-up' Fires

Means of controlling 'blowup' and large forest fires, which have ravaged thousands of acres of valuable Georgia timberland will be sought at the nation's first major forest fire laboratory. The Georgia Forest Research Council's Southern Forest Fire Laboratory is located at the Georgia Forestry Center near Macon and is operated by the U. S. Forest Service. Two other USFS fire labs are in the making; one is under construction in Montana and the other is slated to be built in California.

The two-story brick, steel, and aluminum structure was financed by state funds through the Georgia Forest Research Council. The federal government is expected to spend approximately \$500,000 annually in carrying out the planned research program. This program is the result of a cooperative agreement among the Research Council, USFS and the Georgia Forestry Commission.

The laboratory houses a wind tunnel; combustion chamber; fluid modeling, weather forecasting and control rooms; four chemical-physical laboratories; and a photographic lab. Through these facilities further knowledge of fire behavior will be pursued.

Fire behavior will be studied from model fires that are burned under controlled conditions in the wind tunnel. Efficiency of combustion in fuels of different sizes, arrangements, moisture contents, and with different rates of air supply will be determined. Other experiments which may be set up in the wind tunnel include the study of aerodynamic properties of fire brands and the measurement of rate of fire spread for various litter layers.

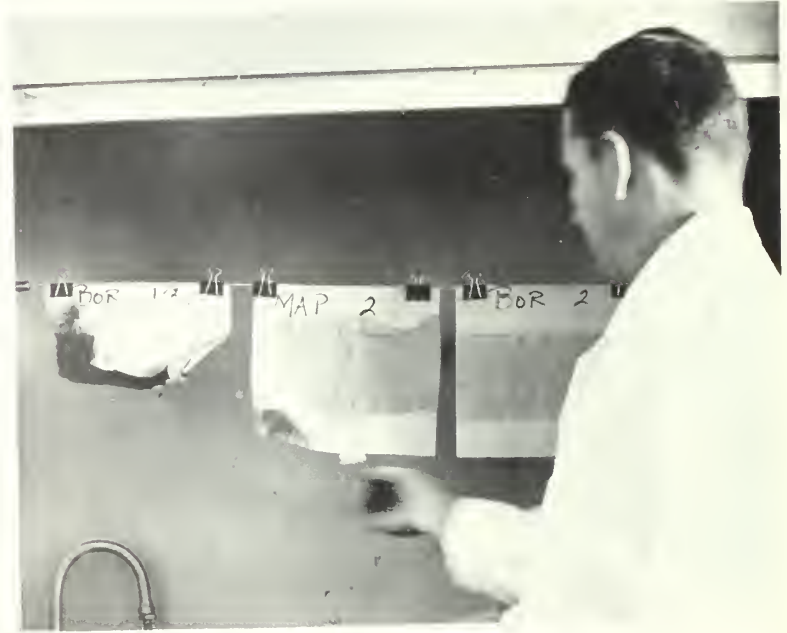
Larger model fires will be studied in the combustion room. Such factors as free convection movement, combustion rate, and heat yield per pound of fuel burned will be explored. Tests will be undertaken to discover the quantity of heat required to ignite forest fuels by radiation.

The fluid modeling room will be used to study low level atmospheric discontinuities and the effect of variable terrain on the air movement near the ground. Colored fluids of different densities will



Temperature and updraft speed of crib fire is determined in combustion room

Fire retardant treated paper tested for burning rate



be used to simulate motion in the free atmosphere.

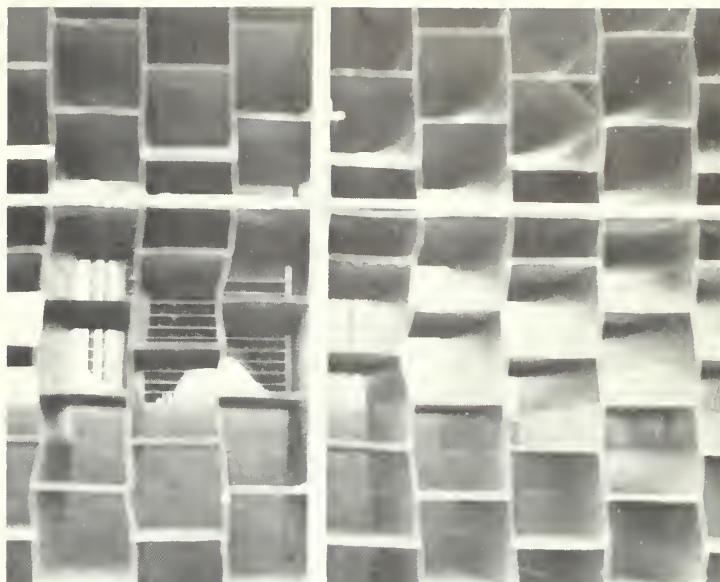
Daily fire weather forecasts are prepared and transmitted to the forestry districts from the weather forecasting room. The actual weather conditions are reported daily to the lab from the Commission's field stations for correlation and recording. Past forecasts are studied to determine key weather factors and to improve future predictions.

Not all of the laboratory's work will depend on the structural facilities such as the wind tunnel, combustion chamber and fluid modeling room. Both theoretical and applied research in fire physics and combustion chemistry may be pursued in the independent smaller facilities within the building. The composition of flame products might be approached with either the mass spectrometer or gas chromatography equipment. Heat yield of fuel samples may be measured using calorimeters. Time lag of moisture in fuels will be determined using a battery of controlled electric ovens and microsensitive balances.

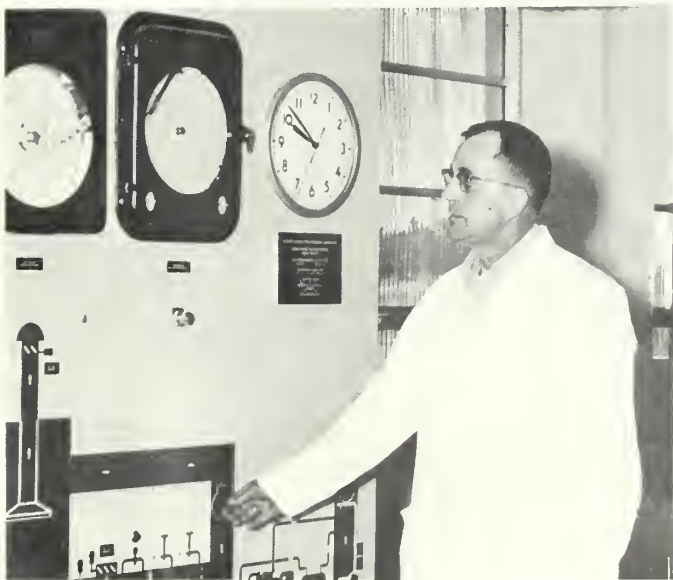
Complete facilities for processing black and white and color film are available in the photo laboratory. Photographic documentation by both still and movie cameras will be necessary to cover, adequately, rapid moving experiments in the laboratory. Coverage of both wild fires and prescribed burns by time lapse movies and aerial photography will play an important part in the overall research program.

A staging area adjacent to the tunnel and combustion room is used to build and assemble models and fuel beds. A hydraulic lift raises the specimens into position in the floor of the tunnel.

All of the laboratory's capabilities are not fixed to the new building. At the Georgia Forestry Center, detailed studies of fire danger measurements have been in progress for several years. Upper wind air conditions are being plotted and studied by means of double-theodolite ballon soundings. A series of



Control panel registers temperature, humidity and wind speed in wind tunnel tests



prescribed burning studies has been established in the Coastal Plains of Georgia, Florida, and South Carolina. Chemical retardant trials have been conducted on the Hitchiti Experimental Forest and the Alapaha Experimental Range. Calibration drops with Georgia's TBM tanker were carried on the George Walton Forest near Cordele.

Research Council Director H. E. Ruark stated that Georgia is fortunate to have a facility in which scientists can study and develop ways to overcome the greatest menace to Georgia's woodlands...forest fires.

K. W. McNasser, USFS, who heads fire research at the lab, stated that when the lab is fully staffed there will be 29 scientists conducting research. McNasser added that research undertaken by the federal government and the State of Georgia will hasten the day when large forest fires will be a thing of the past.

Hare-Nipped Seedlings Raise Landowners Hair

jured trees than the percentage of trees bitten. There will be a noticeable slowness in height growth and some forking of the main stems. In later growth, one fork usually becomes dominant over the other making an acceptable tree.

If planting is done during a period of hard freezes, the seedlings should be dipped in a chemical repellent. This process is recommended rather than spraying after planting because of high cost. Some of the chemicals recommended by the Georgia Forestry Commission are Z.I.P., Arasan SF-X, Tersan, and Black Leaf 40. These chemicals should be mixed with a carrying agent before application. The carrying agent dilutes the chemical and enables it to stick to the tree. Suitable carrying agents are water emulsions of asphalt, vinyl resin, or acrylic resin.

Rabbit damage can also be reduced by planting other species of pine, planting susceptible species using preventive measures, planting only large seedlings of these species and burning over the site before planting.

Damaged seedling...

Newly established tree crops are springing up throughout Georgia again this year. If this crop is to grow into acceptable merchantable trees, disease, insect, and rodent damage will have to be controlled.

Rabbit damage, which may occur during the planting season, can present a major problem in the establishment of new pine stands. However, it is not a major statewide problem. Rabbit damage is usually confined to those areas which experience hard freezes. These hard cold spells kill the green vegetation that comprises the rabbit's diet. This leaves the green tender shoots of small pine seedlings for rabbit food. Large seedlings are not usually bothered by rabbits. Pine seedlings most effected by rabbit damage are loblolly, slash and shortleaf pine.

Rabbit damage can be identified by the clean cut 45 degree angle at which the seedling bud is bitten. In addition, the side branch or top is often left beside the cut stub. The needles are seldom injured, and unlike some rodents and insects, they do not damage the bark.

A sign of rabbit damage does not mean that the seedling is dead. With high quality seedlings, a moist site and favorable weather conditions, following the damage, good survival can be expected. The seriousness of the damage depends more on the mortality percent of the in-



....grows into acceptable tree

Four North Georgia landowners have received initial recognition for producing 300 board feet of timber per acre per year by the Tennessee Valley Association of Test-Demonstration Farm Families. Cooperating in this project for recognizing 300 board footers are the TVA, Georgia Forestry Commission, and the University of

tial if national demands for forest products are to be met.

In the Tennessee Valley there are some 240,000 woodland owners. Ninety-one percent own less than 100 acres. However, approximately 46 percent of the total 6,000,000 acres are in their hands. Average annual growth in the Tennessee Valley is approximately 100 board feet per acre. Potential average growth is estimated to be 300 board feet of high quality timber per acre per year.

Kilbourne pointed out that if all the farm families in



300 Board Footer Awards Presented To Georgians



Georgians receive 300 board footer award from Kilbourne; Walker and McComb show approval

Georgia Agricultural Extension Service.

The first landowners recognized through this project were Carl Dover, Ellijay; Robert L. Sosebee, Blue Ridge; Jules A. Case, Trenton; and Cub Hullander, Ringgold. The combined efforts of these woodland owners are producing 449 board feet of timber per acre per year on 535 acres.

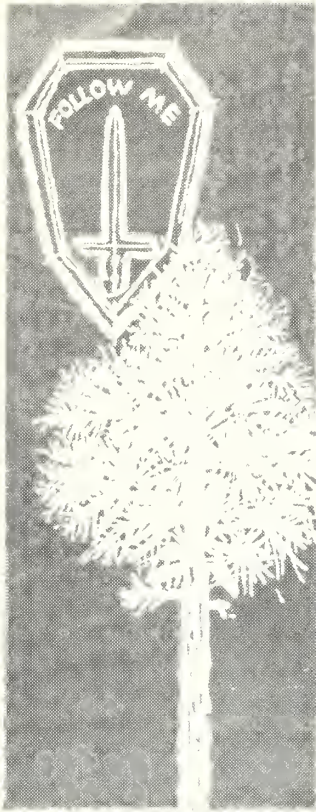
Richard Kilbourne, director of the TVA forestry division, said that the awards are being made to encourage more productive use of forest land. The project is designed to locate current woodlands that have reached the 300 board foot production level through applied forest management. The project is also intended to set a standard for recognition, and to publicly recognize good forest management practices so that other woodland owners will be encouraged to follow their example.

Recent surveys and studies by government and private agencies all recognize that the level of protection and management practices is relatively low on smaller forest ownership. Raising the level of these practices is essen-

the TVA area would step up forest production from the present rate of 100 board feet per acre to 300 board feet per acre it would increase the total income some \$20,000,000. Kilbourne added that the project for recognizing the 300 board footers would increase forest income and provide for adequate watershed protection.

To qualify for the 300 board foot award an inspecting forester must accurately determine the total acreage of the woodland. The acreage is based on the average annual radial growth for the past five years. The minimum size must not be less than 10 acres. An inventory will be made by a professional forester to obtain a stand table by diameter classes for conifers and hardwoods. Pine trees to be considered as sawtimber must be at least nine inches and hardwoods 11 inches in diameter at breast height. The woodland owner must be from one of the 125 Tennessee River watershed counties.

An identical project has been developed with extension directors and state foresters in Alabama, Mississippi, North Carolina, Tennessee and Virginia.



Poles leave Fort Benning during harvesting of sawtimber to make way for new roads

BENNING

Tops Posts In Timber Yield

The greatest 30-day timber yield for a military post was recorded in June - July, 1959 at Ft. Benning near Columbus. Approximately 1,855,000 board feet of sawtimber and 966 cords of pulpwood were harvested during that period.

The harvest record returned to the Federal Government \$59,014 in revenue, according to Norman F. Force of Columbus, chief forester of the Forestry Branch, U. S. Army Infantry Center Engineer Section. In accordance with present procedure, this amount is paid directly to the U. S. Treasury and does not revert back to the military reservation.

The forester emphasized that military classes and demonstrations by the Infantry School have priority over the harvest of timber. Therefore, cutting crews are often kept out of the post's woodlands for long periods of time during training sessions.

Although the forestry operation is secondary to military planning, timber harvesting on the 182,000 acre



Poles stand ready to be harvested as a by-product to expansion of training facilities

post is under a well planned program. Areas to be harvested are made known to the Savannah District, Corps of Engineers. The Corps, in turn, invites bids from several hundred contractors who may be interested and the high bidder is awarded the contract.

Many out-of-state contractors are attracted, but most of the harvesting is done by Georgia and Alabama firms.

The largest current contract is with Sullivan Lumber Company of Preston, Georgia, for three million board feet of pine sawtimber.

Actual harvesting at Ft. Benning, however, is conducted under the supervision of the District Engineer Timber Harvesting Project Office. The office, located on the reservation, is headed by John A. Cleveland of Columbus, resident inspector.

In fiscal year 1959, 12,311,000 board feet of sawtimber, 11,675 cords of pulpwood and 6,673 telephone poles were cut for a return of \$440,342 to the U. S. Treasury. Present contracts, which have been let or are pending, involve 12,500,000 board feet of pine sawtimber and two million board feet of hardwood. This valuable timber is scheduled to be harvested in fiscal years 1959-1960.

Receipts from Benning's timber operations are the largest in the district, although another military post in the area has a greater acreage of timber. The timber harvest on the post near Columbus is planned by the Forestry Branch in conjunction with clearance for roads,



Pole subcontractor clears sawtimber on Bickford Range

Pole is measured during clearing of sawtimber

Poles are loaded in sawtimber harvesting to make way for training area expansion

ranges and other projects planned by the military reservation.

Subsequently, the post's harvest helped the Third U. S. Army attain the lead in timber harvested over all other Army areas.

Force explained that reforestation on the reservation is conducted through a system of assisting nature in seeding. This is accomplished, he said, through preparation of the ground to insure growth of natural seeding by the present stand of timber.

The cost of this method of reforestation on the post's woodlands is extremely low and considerably less than a seedling planting program which runs from \$12 to \$15 per acre, the forester said.

Force said both methods bring about the same results, but the natural seeding procedure is the only one practical under the flexibility of the military program.

John C. Metcalf, assistant post forester, said the accident record on the reservation is excellent for both forestry personnel and contractors. He said there has been no accident of any nature for 761 days.



The Amazing Adventures Of *SMOKEY BEAR*

The Smokey Bear Fire Prevention Program was born during World War II days when it was feared that saboteurs might attempt to destroy valuable timber through forest fires. 'Smokey' officially became a national symbol in 1945 and gained immediate success. Today, he is still an outstanding symbol of forest fire prevention.

In 1941, before 'Smokey' came on the scene, there were more than 210,000 forest fires which burned more than 30,000,000 acres of forest land. By 1958, this figure had been reduced to 100,000 fires with a little over 3,000,000 acres destroyed. Some two-thirds of these total fires and acreage burned occurred in the South.

'Smokey' through the news and advertising media, had a large job to do at the outset. He had to break the public's habits of tossing lighted matches and cigarettes from car windows; warn hunters and fishermen about leaving burning camp fires; and caution landowners on how to burn off their land for planting.

The results of 'Smokey's' program was realized in Georgia in 1957. This was the year that a long sought goal of losing to fire less than one-half of one percent of the states more than 24 million protected forest acres materialized.

This goal was accomplished through the combined efforts of the public, Georgia Forestry Commission and the U. S. Forest Service in putting over 'Smokey's' fire prevention program. Radio and TV programs, fair exhibit themes, talks and demonstrations were all aimed at making Georgia a greener state.

In 1959, a Southern Cooperative Forest Fire Prevention Program was developed to further reduce the forest fire problem. The Forestry Commission has provided material that has been developed into radio programs, TV trailers, and a fire prevention poster. This material is aimed at the specific problems of fire prevention in fire prevention in the South.



The use of our forests by vacationers, sportsmen and tourist have increased since 'Smokey's' insertion in the fire prevention program. The familiar symbol is credited with saving the United States \$10,000,000,000 in board feet of timber that didn't burn, in recreation areas that were not destroyed, in watersheds that were not made bare. This figure is based on a projection of fires and acreage burned combined with increasing population trends.

'Smokey' has created an army of civilian forest 'rangers' who put into practice fire prevention methods prescribed by the symbolic 'Smokey'. These civilian forest rangers are not the only ones helping in forest fire prevention. Boy Scouts, Girl Scouts, Camp Fire Girls, 4-H Clubs, Safety Patrols, and Smokey Bear Clubs have come to 'Smokey's' aid.

Every year more people are doing their part. . . all because a kindly bear convinced the country that forest fire prevention is important.



An informed public is an educated public

Logging the foresters...

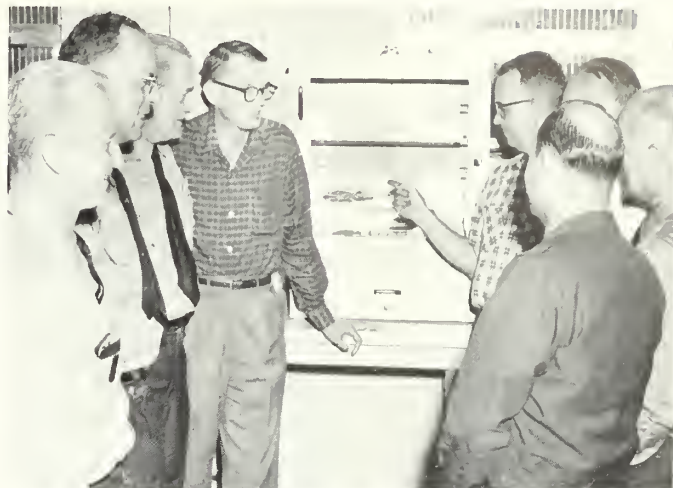
TELFAIR CONCLUDES CLINICS . . . A fire control demonstration held recently at the Telfair Forestry Unit headquarters near McRae climaxed a series of clinics designed to foster better forestry practices throughout the county. The clinics, which also featured films, lectures and chart talks on timber harvesting, utilization of woodlands and reforestation, were jointly sponsored by the forestry unit, Telfair County agricultural agencies and forest products industries.

GUM STUDY BEGUN . . . J. Reid Parker, assistant professor of forestry at the University of Georgia, has begun a study of the economics of naval stores. The study will seek means for promoting efficient gum production as an integral part of forest management. The study is supported by the American Turpentine Farmer's Association and the Union Bag-Camp Paper Corporation.



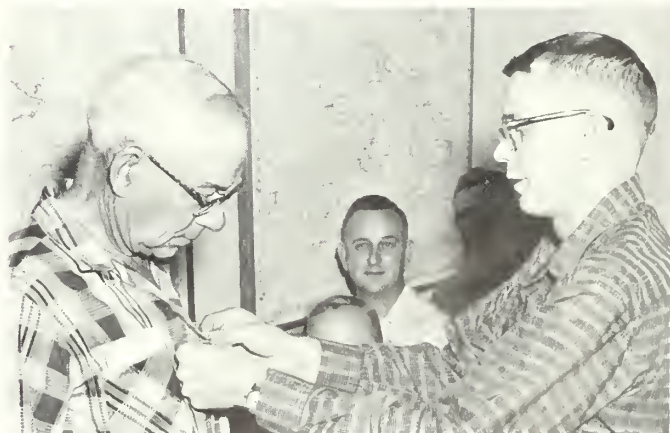
Georgia Forestry and Game and Fish Commission personnel discuss fire patrol plans during managed deer hunts in November in the wildlife management area near Eatonton. The personnel include; Sam Ramsey, ranger, Game and Fish Commission, J. D. Bowling, assistant chief Law Enforcement, Game and Fish Commission, Bob Wynens, pilot, Georgia Forestry Commission, and Bob Gore, chief investigator, Georgia Forestry Commission.

VISITORS FROM PANAMA . . . A Panamanian logging and sawmilling productivity study team recently toured the Georgia Forestry Center near Macon. The team also visited the Morgan Memorial Nursery in Houston County as part of its study and observation of logging and marketing operations and modern forestry methods and techniques in the United States. Georgia Forestry Commission Director Guyton DeLoach said the team will prepare a report of its tour for distribution to the sawmill industry of Panama. Heading the team on its national tour is Francisco Comejo, director of the forestry department of the Republic of Panama.

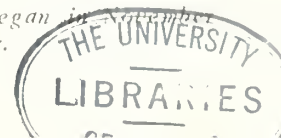


U. S. Forest Service officials from Washington, D. C., Asheville, North Carolina and Atlanta offices recently inspected USFS and Georgia Forestry Commission facilities. The group also looked over nursery and soil bank work in the state. The inspecting team looked into the cooperative aspect of furnishing funds for state and industry projects and what is being done with allocated funds. The inspection party was headed by Edward P. Cliff, assistant chief of the USFS.

FAITH IN PINE MERITS AWARD . . . Judge Harley Langdale, Valdosta, has received the distinguished service award for outstanding contributions in the field of forestry. The high honor was made by the American Forestry Association. The naval stores leader also received a plaque and life membership certificate at the Association's 84th annual meeting in Bedford, Pennsylvania. President Don P. Johnston made the presentation.



Fifth District Fire Control Ranger J. Carl Adams was recently awarded a certificate of merit and pin commemorating 35 years of service to the State of Georgia. Dr. Leon Hargreaves, assistant director of the Georgia Forestry Commission, made the presentation. Adams began his career with the Georgia Highway Department in September 1929. His service with the Forestry Commission began in November 1943 as Montgomery County ranger.



Georgia FORESTRY

DECEMBER, 1959



You'll Log Profits

The big sawlog signals good times ahead today as it did at Christmas long ago. Through good management practices, reforestation and protection of idle acres, your forest land can produce bigger and better timber for you. Promote bigger profits by proper management and let the financial festivities begin!

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