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Texas FOREST NEWS



Vol. 26 Nos. 1-9
SEPTEMBER, 1947

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TEXAS FOREST NEWS

Volume 26 Nos. 1 - 9 Sept. 1947

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Gibb Gilchrist, President, Texas A. & M. College; W. E. White, Director, Texas Forest Service; S. L. Frost, Editor; Nort Baser, Assistant Editor.

Have We Turned Our Backs On Trees?

What do all Texas forests mean to us? Depending on how you look at them, trees can mean lots of things. For one thing, a tree is one of the most amazing factories in Nature. It breathes through its leaves, twigs, trunk and roots. With minerals from the soil and carbon from the air, its leaves prepare food for the tree which is sent back through countless cells to be made into wood. From this process a tree grows and matures.

To many Texans, looking at their tree-girded acres, the forests mean beauty. To others, they mean shade for home and community. On endless prairies, trees help to break the force of winds. Trees give shelter, homes and food to many kinds of Texas wildlife. On many millions of Texas' acres, tree roots, woven together like a huge net, exert a powerful influence in helping to prevent the catastrophies of soil erosion.

Texas Trees Mean Cash

But looking at them with the calculating, practical eye of the business man, Texas trees also mean cash. For trees grow homes, paper, railroad ties and many other products. Trees mean industries, jobs and taxes to the state. In turning their trees into useful products from which the whole state benefits, many Texans are also coming to realize that with care, these forests, unlike many other resources, will renew themselves.

Perhaps the fact that Texas already has a commercial timber region of considerable proportions has shaded the visions of a 65 million acre empire of wood fibre that spread out westerly from her pine forests. We have always thought of these scrub growth areas as "weed" forests. It's true they don't have the height or girth of our majestic East Texas pines and hardwoods. They have been fought and cussed for years by many farmers and ranchers on whose lands they stand in the way of farm and ranch development. The removal of them is costly.

Why Waste Our Trees?

But why waste them? Why clear them off and burn them up, if we can use them? These weed forests are trees. Trees are wood fibre. Wood fibre is cellulose. We know that wood fibre can be made from chemical processes into paper and many other products.

Perhaps the chemical utilization of much of our low grade woods will never be feasible from a dollar and cents standpoint. But we will never know until we find out what we have in the kinds, quantity and growth of our scrub forests and what we can make from them.

When we understand how little we know about our Texas trees, we realize how much we have neglected them. Products of the soil have been and will always be among the state's greatest resources. It seems that we need some accurate fact finding surveys of our forest wealth and an aggressive research program that will seek to determine our tree growth and new uses for it.

Appropriations For Forestry Increased

State appropriations of $286,000 and $322,966 for the fiscal years beginning Sept. 1, 1947 and Sept. 1, 1948 respectively, were authorized for state forestry work by the Texas Legislature, W. E. White, director of the Texas Forest Service reports.

The appropriations represent increases of $108,410 and $145,310 over the 1946 fiscal year state appropriation of $177,656.

Director White estimated that supplemental funds for the next fiscal year would amount to $195,600 to raise the total monies available for the Texas Forest Service to $481,666 starting Sept. 1, 1947. This compares with a total budget of $382,656 for the fiscal year just ended.

Of the $108,410 increase authorized from state appropriations for the next fiscal year, 40 percent will be allocated to salary increases authorized by the law upping state employees salaries to meet higher living costs. This will leave $65,910 to allocate among six Texas Forest Service divisions for new personnel, new equipment, equipment maintenance and travel.

Directors Approve Expansion

The Board of Directors of Texas A. & M. College in approving the Texas Forest Service budget for the coming year, has authorized the following expansion of the state forestry program:

1. Expansion of the forest nursery site at Alto by 16 acres to provide for more seedling beds.
2. A limited expansion in the area protected from fire in East Texas.
3. Increased equipment to improve forest protection work on the nine million acres now being protected from fire.
4. New equipment, buildings and personnel for the forest products research laboratory.
5. One additional farm forester for forest management assistance work with farmers.
6. One new silvicultural research technician.
7. Limited increases in the educational program.

Publications List

Printed Publications: No. 19 Field Fires; No. 20 Forest Trees of Texas; No. 33 Southern Pine Bark Beetles; No. 34 The Southern Pine Sawyer; No. 35 Pine Tip Moth; No. 37 Trees and The Bible; No. 38 Forestry For Teachers; No. 39 Pupil Activities in Forestry and Related Conservation Subjects; No. 40 Texas Forestry Progress Report for 1945-46; No. 41 Operations Timber; How A Tree Grows.

Mimeographed Publications: Trees As Poets See Them; Making Leaf Carbons; East Texas Forest Lands; Planting Forestry Seedlings; Woodland on Texas Farms; Forest Fires Statistics; Forest Fire Control; East Texas Forest Products Statistics; Killing Undesirable Hardwoods; The Dawn of Texas Forestry Conservation; LeConte's Saw Fly; Pine Gall Rusts; Treating Pine Cones For Decorative Purposes; Rainbow Flames From Treated Pine Cones; Protecting Our Forests From Fire (a sample instructional unit); Wood Products in The School (a sample instructional unit); Christmas Greenery.

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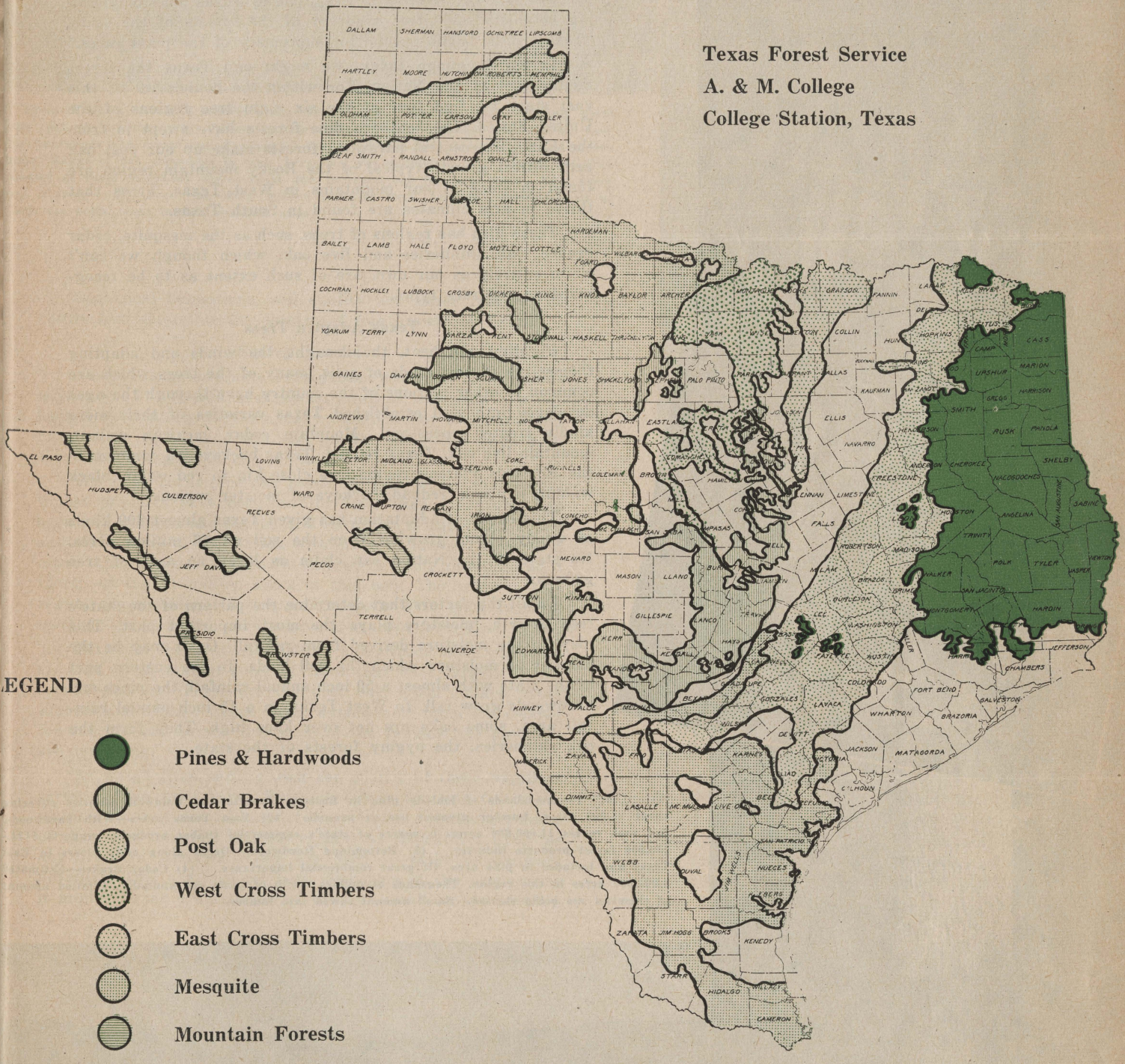
FOREST REGIONS OF TEXAS



This map represents the combined efforts of the U. S. Forest Service, the Soil Conservation Service and the Texas Forest Service. It is the best available at this time, but lacks details on a number of areas in the state which are known to bear tree growth. Because these areas have not been accurately mapped they were not included on this reproduction.

KEEP TEXAS GREEN—HELP PREVENT WOODS AND RANGE FIRES

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TEXAS *Green Gold*

Over plains, mountains, swamps and valleys, trees carpet almost half of Texas.

By S. L. FROST

The late Dr. William L. Bray, one of Texas most outstanding botanists said after a survey of the forests of the state, "Texas is the battle ground for supremacy of the plant races."

In our language today, we might call Texas the forest melting pot of the Nation. For within the boundaries of this vast state we find four of the six main tree regions of the United States. The southern pine forests have swept in from the East. The central hardwood forests make up our post oak belt. Forest growth typical of the Rocky mountain region are found in some of our mountains in West Texas. Trees that thrive in arid climates are found in South Texas.

Texas also has regions of trees, such as the mesquite, cedar brakes, oak shinneries and live oak, which though we can't claim entirely as our own, are of such extent as to be recognized as separate types.

Texas Adapted Trees

Fighting the heat, the drought, the winds and adapting themselves to new kinds of soils, many of the trees which are common to other sections of the country have through the ages developed into well established Texas varieties of their more kindly treated ancestors. Mountain cedar, mexican walnut, mountain live oak, Texas redbud, Texas buckeye all common to the Edwards Plateau region, are close kin to red cedar, black walnut, live oak, redbud, buckeye of moister regions.

This battle of adaptation has given Texas almost 800 kinds of woody plants growing from the soil on 76 million acres. No state in the Nation can claim as large an area of tree growth.

Of all the factors that determine the pattern of the state's tree growth, moisture plays the most important part. This may be the moisture derived from rainfall. Or it may be the amount of moisture which the soil holds. In the eastern part of the state with almost a 50 inch annual rainfall, the pines and hardwoods grow tall. In West Texas, in a 15 inch annual rainfall area, some oaks are not over knee high. They form the oak shinneries, the pygmy forests of the state.





(1) "Lost" Pines—Islands of loblolly pine in Bastrop, Fayette and Caldwell counties covering about 85,000 acres. Lumber greatest use at present. (2) East Texas pines—With hardwoods, this area covers 11,000,000 acres, is source of state's commercial timber products, supports $134,000,000 forest products industry. (3) Bottomland Hardwoods—Occur along main rivers in East Texas and included in pine area. Of great commercial importance. (4) Cedar Brakes—Estimated 5,000,000 acres in this region. Thousands of dollars worth of posts cut annually. Limited amount of chemical use being started. Small amount sawed into lumber.

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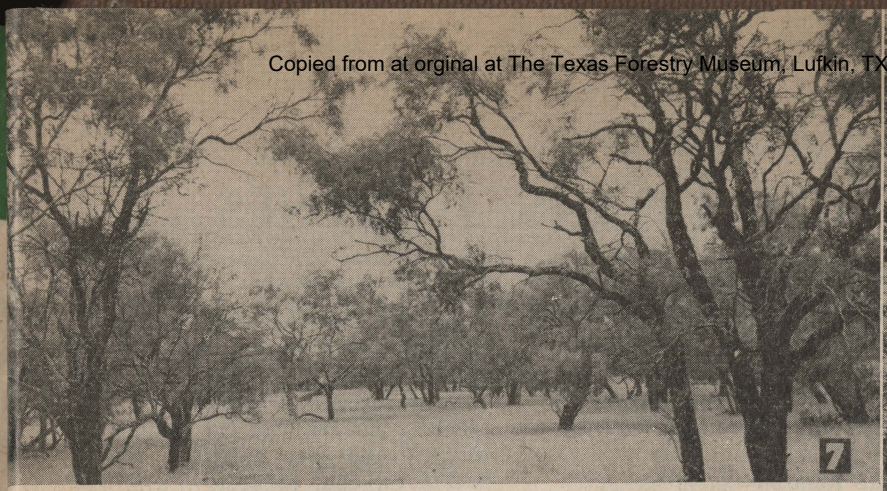
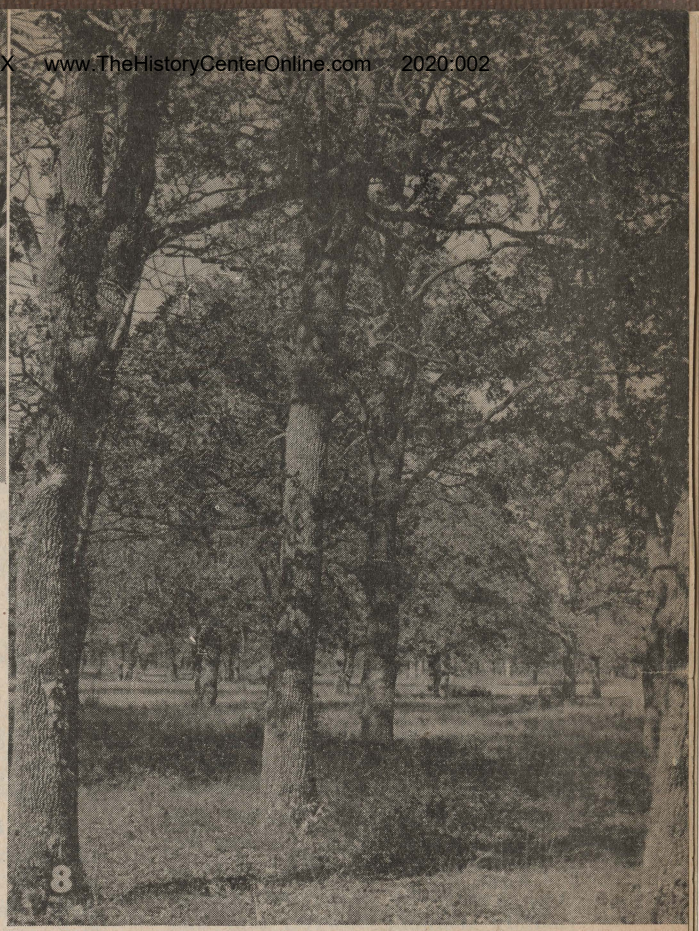




5) Cross Timbers—About 5,000,000 acres. Trees of low quality. Fuelwood and posts mostly cut at present. (6) Mountain Forests—Area not definitely established. Low value hardwoods and evergreens. Commercial use not anticipated. Area rugged and mountainous. Range of oak shinneries in west Texas not yet established. (7) Mesquite—Area estimated to cover 50,000,000 acres. Posts and fuelwood cut for local needs. Vast areas being cleared. (8) Post Oak—Five million acres in trees. Limited commercial use at present for posts, some lumber and fuel wood.

Geological formations, soil quality and other features of nature also determine the pattern of tree growth in Texas.

Survey Needed

Never has an adequate survey been made of Texas woodland acres. The 76 million acres set down as tree growth is not backed by accurate facts in many cases. Money and personnel have never been made available in the quantities needed to chart the tree growth of the state.

The East Texas pine and hardwood belt, where commercial timber products have been cut for more than a century, has been well mapped and surveyed. This region is supplying Texas and other parts of the Nation with crops of lumber, paper and many other products. Scientific forestry is being practiced on a fourth of the 11 million acres in this belt. The trees in this region are considered a crop of the soil. With good farming methods the state can always have tree crops from East Texas.

But from the west edge of the pineywoods there stretches an area of 65 million acres of trees that have largely defied commercial use. These are the post oak, cedar brakes, cross timbers and other regions. Great expanses of them are cleared for ranches and farms. But some of the regions like mesquite are spreading.

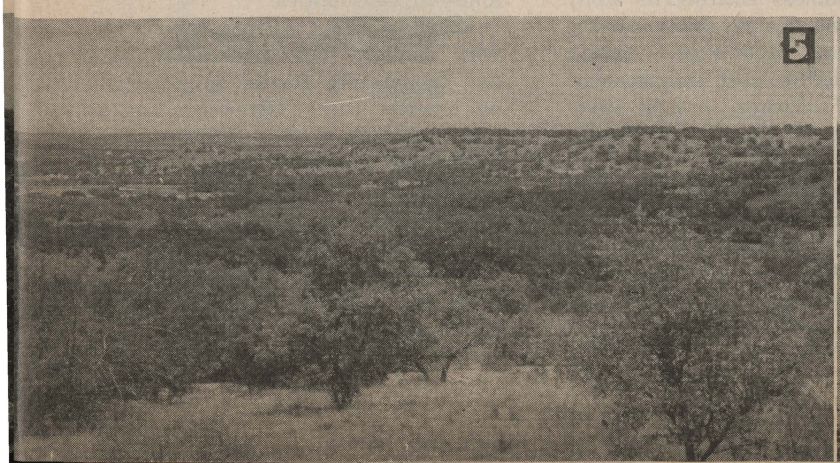
As we go from east to west the quality of these countless acres of trees gets worse. This more than any one factor explains why they are not used to any extent for lumber. Some of them like mesquite and ebony have as beautiful a grain as any trees in America. They are used to make woodenware novelties. This use has not been developed in the proportions it might. Texas could support lots more small wood manufacturing plants to take advantage of its supply of beautifully textured trees.

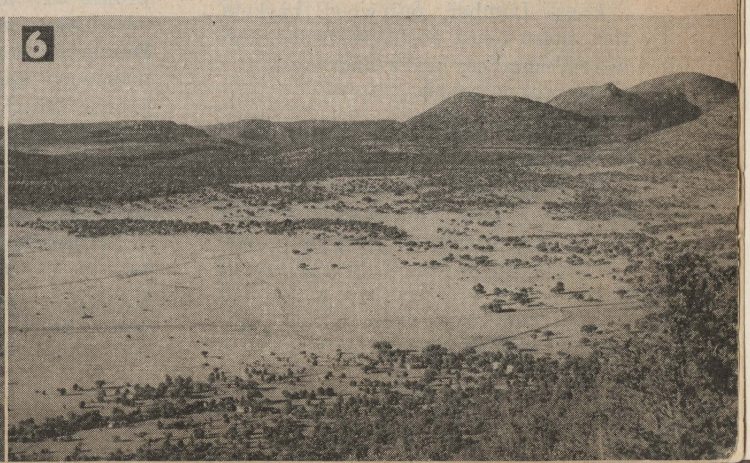
A Challenge To Research

With the advancements in wood utilization for chemical products, Texas forests present a challenge to the research man. People may raise a questioning eye at ever making anything good out of a lot of poorly-formed scrub trees in the state. But as long as rubber of commercial quality can be squeezed out of a lowly two-foot shrub like guayule, there is hope for the ten to twenty-foot tree that contains millions of cells of cellulose.

When Texas will get down to the business of really using its low-grade forests is any man's guess. There are still a lot of questions to find the answers to. It is going to take some long and serious research.

As the Nation turns more and more to the use and dependence on crops and fibres of the soil, we will turn to our forests—Nature's greatest factory of cellulose. From trees we can get the things that will clothe, shelter and help feed us.





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Facts About Your Texas Forests . . .

(Timber volumes for East Texas and post oak by U. S. Forest Service. Other timber volumes are "guesstimates" by Texas Forest Service. Soils data furnished by Edwin H. Templin, Texas Agricultural Experiment Station.)

EAST TEXAS PINE AND HARDWOODS

Area in Texas—11,000,000 acres—in 36 Counties.

Principal Soils—The uplands, comprising 87% of the area, are of light-colored leached acid more or less sandy soils of low natural fertility. The main groups of soils and the approximate percentages of the total East Texas Pine and Hardwoods Area they occupy are as follows: (1) 33% of well drained sandy loams and loamy sands with friable permeable subsoils (mainly Bowie, Ruston and Kirvin soils), (2) 14% of similar but slowly drained soils, mainly in the Flatwoods of southeastern Texas and originally occupied by longleaf pine (mainly Caddo, Segno, and Angelina soils), (3) 23% of well-drained sandy loam and loams with clay subsoils (mainly Boswell, Sawyer, and Susquehanna soils), (4) 7% of loose deep sands (mainly Lakeland soils), (5) 6% of gray wet loams with heavy clay subsoils, comprising pine-oak and post-oak flats, mainly in Red River and adjoining counties (Lufkin soils), (6) 4% of redlands originally forested mainly with red oak and sweet gum (mainly Nacogdoches soils), and (7) 13% of bottomlands (mainly Bibb, Iuka, Ocklockonee, Trinity and Kaufman soils).

Average Rainfall—45-50 inches.

Estimated Standing Timber Volume—67,300,000 cords softwoods; 46,700,000 cords hardwoods. (Includes timber 5 inches and over in diameter breast high.)

Major Species — Longleaf, shortleaf, loblolly pines; red, tupelo, and back gum; white and black oaks; cupress, cedar, white ash, magnolia, elm, cottonwood, hickory, beech, sycamore, maple, and walnut.

Uses—Lumber, pulpwood, baskets, ties, poles fence posts, fuelwood, furniture, handles, boxes and toys.

POST OAK BELT

Area in Trees—5,000,000 acres—in 55 Counties.

Principal Soils—Similar to those of the East Texas Pine and hardwoods Area, but somewhat less acid and having a much larger proportion of intermingled prairies and much less of the sand soils with briable subsoils. The uplands are mainly Boswell, Tabor, Lufkin, Susquehanna, Kirvin, and Lakeland soils; the bottomlands, which comprise about 15% of the area, are mostly clays and clay loams of the Trinity, Catalpa, and Kaufman series.

Average Rainfall—35-45 inches.

Estimated Standing Timber Volume—32,700,000 cords hardwood; 477,000 cords pine; 180,000 cords cedar.

Major Species—Post oak, hackberry, elm, mesquite, pecan, live oak, ash, hickory, cedar. Loblolly pine in Fayette and Bastrop Counties.

Uses—Fuelwood, fence posts, ties, bridge decking and some lumber.

EAST AND WEST CROSS TIMBERS

Area in Trees—Mostly of moderately sandy soils of low fertility with subsoils of reddish clay (Windthorst soils) similar to group 3 of the East Texas Pine and Hardwoods Area but only slightly acid, less leached, and of slightly higher fertility. The area includes many intermixed prairies (largely of Kirkland and Zaneis soils where on shale, and of Tarrant and Denton where on limestone), considerable forested shallow soil over sandstone (Darnell soils), some loose sands (Nimrod soils), and a minor proportion of sandy loams with friable subsoils (Stephenville soils).

Average Rainfall—25-35 inches.

Estimated Volume — 25,000,000 cords.

Major Species—Post oak, black jack oak, live oak, shin oak, western red oak, mesquite, elm, hackberry, cedar and pecan.

Uses—Fuelwood and fence posts.

CEDAR BRAKES

Area in Trees—5,000,000 acres in 53 Counties.

Principal Soils—The cedar brakes proper are almost entirely of stony or chalky nonarable soils of the Brackett, Ector and Potter series, which are shallow over limestone or caliche. On the darker, shallow, stony Tarrant soils of the Grand Prairie and Edwards Plateau, the principal woody species are Spanish oak, live oak and shin oak. Associated deeper soils, largely of the Denton, San Saba, and Valera series, are dark crumbly clays and largely in cultivation but originally were grassland with scattered liveoak trees.

Average Rainfall—20-35 inches.

Estimated Volume — 30,000,000 cords.

Major Species — Mountain cedar, redberry juniper, live oak, shin oak, western red oak, catsclaw, sumac, buckthorn, elm, hackberry, ash, cypress, pecan and mesquite.

Uses—Fence post, fuelwood, cabinet lumber, novelties and cedar oil products.

MESQUITE

Areas in Trees—50,000,000 acres—in 113 Counties.

Principal Soils — In the Rolling Plains of west-central and northwest-central Texas, mesquite is most abundant on the deeper heavier soils, mostly of the Abilene, Foard, and Tillman series. In the Rio Grande Plain, south of San Antonio, the soils are mostly sandy loams to clay loams. They are neutral and mostly limy, moderately to highly fertile. The principal soils series are Webb, Duval, Brennan, Victoria, Orelia, and Goliad. In extensive areas of loose sand (Nueces soils) in Kenedy and adjoining counties, the principal woody vegetation is mesquite and live oak.

Average Rainfall—15-30 inches.

Estimated Standing Timber Volume—100,000,000 cords.

Major Species—Mesquite, shin oak and catsclaw in Rolling Plains region. Mesquite, ebony, huisache, agrito, catsclaw, live oak, retama and many other shrubby trees in the Rio Grande Plain of southern Texas. Elm, ash, hackberry, and pecan along streams.

Uses — Fuelwood and fence posts, limited amount used for furniture and wooden ware novelties.

MOUNTAIN FORESTS

Area in Trees—No estimate available—in 12 Counties.

Principal Soils — Stony, nonarable, very shallow but moderately dark and moderately fertile soils largely on igneous rocks (Brewster series) and limestone.

Average Rainfall—10-15 inches.

Estimated Standing Timber Volume—No estimate available.

Major Species — Pinon pine, western yellow pine, Douglas fir, juniper, oaks, ash, Spanish walnut and mesquite.

Uses—Fuelwood mainly.

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Nursery Adds 16 Acres For Expansion Of Seedling Crop

Seedling production, already one of the most ambitious projects ever developed by the Texas Forest Service, will be expanded even further next spring on 16 acres of land recently leased adjacent to the Indian Mound forest tree nursery near Alto.

The new area will provide an additional five to seven million seedlings each year, according to W. E. White, director of the Texas Forest Service.

An expected crop of 17 million pine and hardwood seedlings will be ready for Texas tree planters this winter. This year's production is the largest ever grown by Texas Forest Service, and the demand for seedlings is becoming greater all the time.

Sixteen million of the little seedlings will be pine species, including slash, longleaf, shortleaf and loblolly pines.

An additional million trees are other species. These include: green ash, black locust, black walnut, catalpa, eucalyptus, Australian pine, Russian mulberry, thornless honey locust, bois d'arc, Arizona cypress, Russian olive, pistacia, red cedar, Chinese tallow, desert willow and Chinese elm.

About half of these are black locust, catalpa, black walnut and bois d'arc being grown for use in fence post plantations in East Texas. The other hardwood species have been ear-marked for use in south and west Texas for windbreaks and shelterbelts. The pine species will be planted in East Texas.

Two-thirds of these seedlings have already been spoken for, and it is expected the remainder will be ordered before tree shipment begins this winter.

Information on obtaining seedlings can be obtained from the Texas Forest Service and county agents.

Meantime D. A. Anderson, chief of the division of silvicultural research, and Larry Marshman, acting chief of the Indian Mound nursery, are getting ready to fence the 16 newly leased acres. The new tract was leased on a 10-year renewable basis with option of purchase at end of this period from Forest Grogan of Alto.

Forest Service Adds 2 New Men



RICH



BASER

Most recent additions to the Texas Forest Service staff at its A. & M. headquarters are a visual aids specialist and an editorial assistant.

Charles L. Rich reported as the new visual aids specialist Aug. 20, and Nort Baser began his duties as editorial assistant Sept. 1. Both are veterans of World War II.

TIP MOTH NOTED IN TEXAS TREES

An outbreak of pine tip moth infestation has been reported from various sections of East Texas, D. A. Anderson, chief of the silvicultural division of the Texas Forest Service says.

The infestation appears to be the worst since 1941. Tip moth insects attack the growing shoots of shortleaf and loblolly pine and kill them. This forces one or more shoots to grow out at the tip and may cause a forked or crooked tree. The insect has not been known to kill trees.

Normally, Anderson says, the tip moth confines its attack to small saplings. This year damage from the insect has been reported in larger trees up to 60 feet in height. Shortleaf pine appears to be more seriously affected.

There is no practical prevention measure fo rtip moth, Anderson reports.

Lake, Recreation Area Being Built At Jones Forest

A man-made lake and recreational area will soon become a part of the W. Goodrich Jones Forest near Conroe in Montgomery county.

Thanks to a recent $1,000 gift from the Waco civic leader and conservationist for whom the forest was named, construction is already under way. Other plans for developing the recreational area within the state forest, according to W. E. White, director of the Texas Forest Service, call for the building of tables, benches and barbecue pits.

The W. Goodrich Jones Forest includes 1,633 acres which have been used largely for research and demonstration purposes. The addition of the recreational area and lake will increase the usefulness of the tract for the public in general.

The forest was purchased in 1924 and consists of native pine and hardwood growth. It was named in honor of Jones who is revered as the father of forestry in Texas. As president of the Forestry Association in 1914, he took the lead in arousing interest in state forestry conservation and fostered the passage of the state conservation law of 1915.

The W. Goodrich Jones Forest is one of five state forests administered by the Texas Forest Service mainly for forest research, demonstration and experimenting in timber growing methods.

"Forestry For Teachers" Manual Sent To Schools

The Texas Forest Service is proud of its latest publication, "Forestry For Teachers," (Bulletin No. 38) which has recently been distributed to school and college libraries throughout Texas.

The 76-page illustrated publication was written by Everett F. Evans, Texas Forest Service school specialist, and is intended to serve as a model in its phase of educational instruction. It will be used by elementary and high school teachers as a background for basic subject matter in forestry and to provide pupil activities and suggestions for correlating forestry topics with regular school courses.

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FAMOUS TREES OF TEXAS

E. J. Fincke, 64, above, proprietor of a grocery store in San Antonio has almost grown up with his favorite tree. For over 40 years, Fincke has been in business at the same spot and his "grand ol' pecan" has kept him company.

In 1944 the tree threw in 226 pounds of pecans for good measure. This year it saved the grocery roof and windows from a hailstorm which played havoc elsewhere. Every year it contributes something to show its devotion to a kind master.

We are indebted to our friends of the San Antonio Light for this picture and story. Can you help us locate other famous Texas trees? Send us the news on a big tree, a famous tree, an unusual tree. We would like to tell other Texans about them.

One-fourth of the rain that falls in the forest is caught by tree leaves and branches and dissipated into the air.

The stand of commercially valuable sawtimber in East Texas is estimated to be about 27,500,000,000 board feet by the International 1/4" Rule.

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Following The Foresters

Nursery Chiefs Attend South Carolina School

D. A. Anderson and Larry Marshman, Texas Forest Service employees in charge of the forest nursery program, attended a nursery school in South Carolina Sept. 2, 3 and 4. The school was held for the southern states forestry departments by the U. S. Forest Service to study new advancements in seedling production.

Frost, Evans Take Part In Pensacola Conference

S. L. Frost and Everett F. Evans of the educational division of the Texas Forest Service attended the conference of Southern forestry education specialists in Pensacola, Fla., Sept. 16, 17 and 18. Frost was chairman of the organization calling the meeting.

E. O. Siecke Back From Extended 3-Months Trip

E. O. Siecke, retired state forester, has recently returned from a three-months trip to Nebraska and through the eastern states. He is a member of the executive committee of the Texas Forestry Association and was recently appointed secretary of the College Station Development Association.

W. T. Hartman Completes Study Of Aerial Patrol

W. T. Hartman, assistant chief of the Fire Protection division, has recently completed an intensive study of aerial forest patrol work which will be used as a basis for mapping new methods of fire observation and detection.

Anderson Will Help Plan Foresters Field Manual

D. A. Anderson, silvicultural research chief of the Texas Forest Service, has been appointed a member of a committee of the Society of American Foresters to make plans for a Foresters Field Manual.

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