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(Photo courtesy of Dr. Paul Burns, LSU School of Forestry.)



Virgin baldcypress stands such as this one in a murky Louisiana swamp live only in memory now.

The Swamp's Silent Sentinel

A History of La. Cypress Logging

by Willie Proffit

The grandeur and durability of baldcypress is legend. The sight of one or several of these moss-festooned trees and their cypress knees reaching skyward out of the watery vastness of the swamp thrills our senses with their stillness. They also evoke memories of the glory days of the species when the century was young.

Louisiana's silent sentinel of the wetlands has been a source of

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warmth, wealth and shelter for its people since French Colonial days. Two cypress mills are known to have been in operation as early as 1716. Thirty reported exporting lumber to the West Indies in the 1800s for production of sugar packing boxes.

Indigo and tobacco had already had their heyday. Cotton plantations and sugar kingdoms were already assured an entry into the annals of the state when cypress (*Taxodium distichum*) began making its bid to become king of the southern swamp forest. Still, it languished until 1963 before achieving official status as Louisiana's state tree. Fit-

tingly enough, the new national champion standing cypress was covered late in 1980 near St. Francisville in West Feliciana Parish.

Though widely distributed throughout the warm, humid Southeast and southeastern United States, heaviest stands are found in the bottomlands of the lower Mississippi Valley and Florida. Of ancient lineage, cypress trees in the great primeval stands not uncommonly reached an age of over a thousand years, a height of from 120 to 150 feet, and six to eight feet in diameter above the swell at the tree's base.

Because it occurs in large-scale industrial quantities only where it

ing is difficult and expensive, it is an industry with a troublesome side. The old waterpowered mills worked well enough to sustain Louisiana's colonial commerce, but they remained essentially small operations of owners who were "planters first and lumbermen second." Harvesting was by necessity a seasonal activity as loggers were governed by the rhythms of the swamp waters in order to float logs during high water.

Early woodsmen developed the technique of "girdling," or deadening, the huge trees in preparation for rafting and towing. Physician Gerald P. Gable of Hattiesburg, Miss., and son of the late superintendent of logging and milling operations at the Dibert, Stark & Brown Cypress complex at Donner, tells how this was done. In a designated section of the forest, axmen would remove a ring of bark from around the tree by chopping through the bark and sapwood, thereby cutting off the moisture supply to the foliage. After the cy-

(Photo courtesy of the LSU Department of Geography.)



Steam-powered skidders with overhead cableways were a major innovation to the baldcypress logging industry in the late 1800s.



Floating the huge cypress logs down the bayous was a once popular method of getting the wood out of the swamp and to the mill.

press needles had dried and fallen, "fellers" would come in and fell the trees which would then "float like a cork."

Retired LSU Forestry Professor Robert McDermid witnessed a refinement of the girdling technique which the May Brothers at Garden City developed. They would erect a levee around an area of a thousand or more acres, flood it after girdling the trees, and send in workmen later to raft the dried logs to a point where they were loaded over the levee and barged to the mill. To McDermid's knowledge and that of a former employee of the company, no others employed this unique and successful system.

Primitive float logging progressed with the invention of the steam skidder in 1883 to the pullboat (essentially a barge with skidder equipment installed on it) in the '90s, and on to the overhead-cableway skidding technique. By 1913, the combination of logging by massive machinery and railroad propelled lumbering into an industry for all seasons.

An evolution of milling techniques had preceded the advancements in logging operations. A steam-powered mill existed in New Orleans as early as 1803. By 1820 there were eight in Louisiana. Gang saws emerged around 1850, circular saws in 1855, rotary saws in 1860.

Cypress shingles were the principal product of the mills in the '80s and '90s. Front-runners were the Bowie Lumber Company and Joseph Rathborne's mill on the Mississippi. A Plaquemine mill on the Mississippi, A. Wilbert's Sons Lumber & Shingle Co., had a capacity of 53,200 feet of lumber and 157,000 shingles a day.

Although the Carolinas and Florida, like Louisiana, had a history of small-scale season cypress lumbering in the beginning, it remained for the Bayou State, with its majestic, dense stands of high-quality "relics of the past" to become the leader in major commercial operations. A September 1915 U.S. Department of Agriculture bulletin supports this statement, reporting that 153 mills in Louisiana had cut 608,854,000 board feet in 1909, or 63.7 percent of the nation's total cypress production.

Nationwide, the total volume of baldcypress sawtimber cut had been 29 million board feet in 1869. By 1913 mills were going full throttle. Production peaked. Volume zoomed to slightly more than one billion. This was over one million more than the 1912 cut (record at the time), despite the fact that there were 372 fewer mills than in 1912. "Cypress fever" had indeed swept southern Louisiana that banner year of 1913, with 94 mills reporting 744,581,000 for a percentage of 67.9.



Trees were often axed and "girdled" to cut off the moisture supply, thus allowing the tree to float out easily.

Despite the negative kick of the war years of 1916 and 1917, cypress managed to hold its own. However, the 296,986,000 board feet milled in Louisiana in 1925 signaled the demise of the colossal industry. In the stunningly short span of 35 years, the gigantic mills had "cut out" the mammoth tracts of virgin growth. Cleanup operations exploited a few remaining commercial stands. Virgin forests were on their way to becoming just a memory. The highly desirable wood may be "eternal," but the supply was indeed finite.

By 1940 national production was still spinning along in excess of 400

million board feet but by 1954 had dipped to 240 million. The last Louisiana company that could be called an "integrated industrial cypress operation" shut down in 1956. Producing less than 200 million board feet today, the industry nationwide has become virtually somnolent, the whirl of the mills hushed. A haunting silence returned to the water reaches of the swamps.

David Williams of Louisiana Southern Forest Products in Port Barre reports that his company has been wholesaling cypress lumber for nearly two years, adding that it accounts for 30 to 35 percent of his business and he is "looking for it to get better." Williams believes he is the forerunner in successful, if expensive, helicopter logging (using large double-prop copters) to supplement conventional methods within the Lake Verret watershed area.

A couple or so years back, the Yates Construction Company bought the Batson Lumber Company at Ponchatoula, who had previously logged some cypress by helicopter for a short period.

Since opening last fall in a newly renovated sugar mill in Thibodaux, the Masonite Corporation has also logged by helicopter, tapping mostly second-growth cypress from natural regeneration.

The Pharr and Williams Saw Mill was the largest and oldest in the Atchafalaya Basin. Captain John Pharr (a sugar planter) and the young whiz, Frank B. Williams, both southerners, organized their mill in 1872. Williams bought out his partner in 1896 and ten years later organized his own F.B. Williams Cypress Co. He acquired more than 60,000 acres of timberland, "about one and one-half billion feet of standing cypress and tupelo lumber," and formed two other companies, one at Ponchatoula and another near New Orleans. His foresight plus his managerial acumen have caused some to claim him mightiest of all.

Henry E. Hardtner of Alexandria was a crusader in successful experimentation with regeneration of pine trees on cut-over lands of his Urania Company. But cypress was a tree of another cut. H.B. Hewes of the Jeanerette Lumber and Shingle

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considerable excitement. But this notable experiment didn't live up to the billing it was given. An informant wrote in the late '60s that it had been abandoned "... because the percentage of seedlings eaten by rabbits and killed by vine overgrowth, coupled with rising labor costs, make it economically unsuccessful."

Crucial to young seedlings' survival is water level. If completely flooded during their actual growing season, they simply will not survive. If the top third remains exposed, the chance of survival is high. LSU's Center for Wetland Resources five-year study to determine the effect of restricted water flow on natural regeneration gives past research validity. Of three test areas observed, Research Associate Will Conner wrote in 1981 that very few seedlings were found in a free-draining natural area, none were found in an impounded area, but "good seedling survival and growth" in a crawfish farm, with its controlled flooding

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(Photo Courtesy of Dr. Ben Jackson, LSU School of Forestry)

Helicopter logging is one of the newest innovations in the modern cypress industry.

CYPRESS

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Company reported to the Southern Cypress Manufacturers' Association in 1910 that the slow growth of cypress made it impractical to consider reforestation, and recommended that the lumbermen reclaim their cut-over swamp lands by draining and clearing. This, plus the state's favorable reclamation laws brought in the cattle and soybean cultivation.

LSU's Associate Professor of Forestry John R. Toliver disagrees with the common belief that we are essentially "mining" cypress — that once cut it cannot be replaced or reproduced. He believes regeneration techniques can be worked out. Even so, he admits that there are few extensive natural stands of saplings and that large areas of young seedlings are "virtually non-existent" because of the reseeding characteristics of cypress and its changing habitat

often make natural regeneration of large stands unsuccessful. Or perhaps the lack of harvesting activity has not created conditions conducive to the process.

Because virgin trees were extremely large in diameter, their heartwood was considerably wider. The inner core of younger growth trees, however, does not appear to be as resistant to decay. "This is why some of the elegant old plantation homes built from virgin cypress heartwood will probably stand forever," laughs Toliver. With cypress, older is better.

Joseph Rathborne, with Prof. F.S. Gooch of Southwestern Louisiana Institute, embarked upon a five-year plan of cypress reforestation in 1948. Their intention—to regenerate Rathborne's 45,000 acres of cut-over lands near Choctaw in Lafourche Parish—was laudable. In three years they had planted a total of 164,710 seedlings, generating

(Photo courtesy of Rathborne Lumber Co., Thibodaux, Louisiana.)



Logging was a slippery business when cypress was rafted.

CYPRESS

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and dry period cycle, produced a "healthy forest."

This year Toliver will experiment with containerized-grown seedlings that can be slipped out of the tube without disturbing the root system—as opposed to bareroot planting. He knows of no one else experimenting with this idea, probably because of the cost factor, but the chance of good growth may overcome this.

Contributing to regeneration woes is nutria, that introduced wildlife species that someone said "has become an excellent candidate for survival." Two days after planting cypress, nutria will have followed to pull up every seedling or clip them off. Reason: still unknown.

Also, cypress may grow well on poor swampy sod, but it requires an abundance of overhead sunlight. Therefore all residual growth left from the original harvesting must be cut back to ground level and in Louisiana prodigious weed and vine control must be exerted.

In the fourth quarter, 1955, issue of *FORESTS & PEOPLE*, federal research forester Herbert S. Sternitzke reported that second-growth cypress was "coming back." Some years later Sternitzke asked in another publication: "Bald Cypress: Endangered or Expanding Species?" The Forest Service's updated appraisals in 1972 had indicated that the volume of cypress growing stock had risen approximately 26 percent between 1953 and 1968—an average annual increase of slightly less than 2 percent.

Sternitzke observed that Florida and Louisiana encompassed more than half of the inventory of 4.6 billion cubic feet, with most of the remainder in Georgia and South Carolina. Besides heartening trends in inventory, he felt that the relationship between net annual growth of 42.1 million cubic feet in Florida and 70.6 million in Louisiana with corresponding annual removals of 18.2 and 5.5 million cubic feet is an important criterion for establishing cypress supply on commercial forest land. Beyond this, Sternitzke asserted the proposition that the relationship between growth and removals in Louisiana was "impressive" in

that three-fifths of the total surplus growth was concentrated in our state.

In a USDA 1975 bulletin freighted with tabulations, Paul A. Murphy showed a natural growth of 145.5 million board feet of commercial cypress forest land with an annual removal of 38.6 for the state of Louisiana in 1973. State Forester H.L. Williston blinked the soothing message in 1980 that, according to the most reliable recent survey, the volume of cypress totaled 5.5 billion cubic feet in an area ranging from 3 to 5 million acres.

Optimism notwithstanding, the future of merchantable cypress has many question marks hanging over it. As today's foresters wrestle with the issue, of this there is no doubt: A lot more time and research are needed before the key will be found to unlock the door.

Prof. Ervin Mancil of the University of Southeastern Louisiana is among those scientists who have become exercised about the "imprints"

left on the landscape. In his 1971 dissertation he found that before the age of mechanized lumbering, the few unsightly scars left on the swampscape were largely erased in the ensuing industrial decades beginning around 1890, when the face of the boggy bottomlands began to change dramatically.

Early logging by floating and oxen had resulted in the removal of minimal amounts of cypress, plus logging had been seasonal. Pullboat lanes blocked drainage in some areas, but they have a better regeneration record than those logged by railroad skidder. Blocked drainage resulting from railroad beds caused some swamps to deepen so that trees could not regenerate. Significant modifications in vegetation wildlife resulted. In some instances railroad steel, ties and rolling stock had been abandoned on the spot.

Left behind now in scattered groups are ghostly remnants of grandeur to remind us of the majestic virgin forests.



Finished Cypress shingles stacked for drying.