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Cypress logging and the Louisiana coast

By DR. PAUL KEDDY PhD.

(EDITOR'S NOTE: Recently, The Ponchatoula Times told you about our successful excursion to look for 100 acres of virgin cypress forest. We promised to follow up with some background information from Dr. Paul Keddy's forthcoming book "Water, Earth, Fire: Louisiana's Natural Heritage." Here is some of what this book has to tell us about logging of cypress back during its heyday in Ponchatoula. Dr. Keddy says his book will be available this year, and will include over 80 maps and illustrations. The former Ponchatoula resident is a biologist on the faculty of SLU. Local cypress expert Frank Vallot, owner of Acadian Cypress, has long promised The Times an interview detailing modern cypress lumbering practices, so look for that follow-up report in an upcoming edition.)

European colonists quickly discovered that cypress wood is resistant to rot, yet strong and easy to work. The Louisiana timber trade began early, around 1700. Much is written about cypress logging; the following overview comes largely from a book chapter on southern deepwater swamps, with specifics for Louisiana extracted from an article by Rachel Norgress in the Louisiana Historical Quarterly.

Louisiana once had more than 1.6 million acres of cypress forest. Some of these trees were 120 feet high and from 25 to 40 feet in circumference. One large tree felled in Livingston Parish along the Amite River in 1931 was more than a thousand years old and 91 inches in diameter at the base. When William the Conqueror invaded England in 1066, this tree had already been three hundred years old. The local newspaper lamented. "There is a warning from this fallen

giant. Its huge stump with its 1,300 rings seems to proclaim that the cypress tree was one of the last of its kind. It belonged to that forest primeval so fast disappearing. Easier it was to struggle against the storm and the lightning than against the invasion of the woodsman, and the whirl of the sawmill."

Because cypress swamps are flooded for much of the year, harvesting was at first a difficult proposition and only a

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seasonal occupation. Bummers and swampers from the north came south each year by train or steamboat to join local Cajuns in the logging camps for the winter cutting.

By 1725, loggers learned to girdle the bark on the trees during the late summer and winter to kill them, in which case the wood dried enough to be cut during the winter and then floated out during the high water in June.

Swampers would work from boats or rafts to fell the tree, trim the branches, cut the trunk to log lengths and build them into rafts. These rafts could then be floated to mills for processing. The May Brothers Company in Garden City, Louisiana, once constructed a levee 6 feet in height around a swamp to flood it in order to float out the logs. Ditches were also dug through swamps to carry floating logs and to provide water-power for mills. Since the mills were powered by floodwater for only a few months of the year, most mills were small operations carried out by landowners who were planters first and lumber men second. Even so, these early activities not only removed the forest, but the levees and drainage ditches began to alter the water levels that were essential for the re-growth of trees.

The first advance toward large-scale commercial logging of cypress was driven by changes in legislation. When the Homestead Act of 1866 was repealed and replaced by the Timber Act of 1876, swampland was simultaneously declared unsuitable for cultivation and unavailable to private individuals. Large tracts sold for 25 to 50 cents per acre. The present ownership patterns in Louisiana forests originated in these sales to a few well-connected individuals and families. The trees on the land may have taken a thousand years to grow, but were sold for a fraction of their value and this historical resource was transformed into private wealth within less than 40 years. By 1934, the state had more than 1.6 million acres of cutover cypress land, with only 22,000 remaining in cypress forest.

Shortly after the Timber Act passed, in 1891, pullboats further mechanized logging. Using cables and winches, pullboats could drag in fallen trees from as far away as 5000 feet. Canals were excavated at 10,000 foot intervals, allowing entire forests to be stripped systematically. The logs were winched toward the larger canals along "runs" spaced some 150 feet apart. Each run was cleared of trees and stumps, and served as a pathway for repeated dragging of logs, which gradually scoured a mud and water filled ditch some 6 to 8 feet deep. Aerial photographs show that this damage has persisted for more than 100 years—the regular spacing of canals and runs is still evident. In some places, logs were winched into canals from one point, in which case the pullboat runs radiated out-

ward like spokes of a wheel. Both parallel and wheel-shaped markings are still visible to visitors flying over the Manchac Swamp into New Orleans.

Dredges dug larger canals for pullboats. These canals were from 10 to 40 feet wide, and from 8 to 10 feet deep, resulting in the partial drainage of many swamps. These drainage canals too are still visible from the air. In other areas, railway lines were laid — between 1880 and 1910, a mere twenty years, the length of railroads in Louisiana increased from 650 miles to more than 5,500 miles!

Logging reached a peak in the early 1900s, with a billion board feet cut in 1913. Most of this came from Louisiana — enough wood to lay a foot wide cypress boardwalk almost from Earth to the moon. Whether you were born in Louisiana, or are visiting from another region, it is now difficult to imagine how impressive the great cypress forests of the state once appeared and the scale of their destruction. One early logger describes how:

"We just use the old method of going in and cutting down the swamp and tearing it up and bringing the cypress out. When a man's in here with all the heavy equipment, he might as well cut everything he can make a board foot out of, we're not ever coming back in here again."

Mr. Harry Hardener, a prominent lumberman in north Louisiana, wrote a report for the Louisiana legislature in 1910 expressing the consequences of this approach:

"Forests were intended to protect us from soil erosion, cyclones, climate changes, and hurricanes. Shall we destroy the protection? We are doing it, and so rapidly that inside of twenty years Louisiana will be the poorest state in the Union unless measures are adopted to prevent these calamities. What has the lumberman done? Proceeded to cut up these forests just as fast as he can, not leaving even seed to reforest his lands; running his mills night and day; producing more lumber than the country needs Is it not time for the State of Louisiana to Act?"

In the year following his report, the lumbermen of Louisiana cut 3.5 billion board feet of lumber. (Three years later, the passenger pigeon and Carolina parakeet were extinct.) Seven years later, the rate of forest removal had accelerated to a staggering 4.2 billion board feet. In 1920 it was clear that "It was just a matter of a few years before the supply of cypress would become exhausted. By 1925 many of the once gigantic mills had "cut out," the mills were silenced, ...the final whistle had blown and the mill laborers had come to seek employment elsewhere."

According to J.H. Foster of the United States Forest Service, the lumber industry had contributed little to local economies because they "obtained their lands at low prices and

have made fortunes from the increase in the value of the timber. The industry does not develop the country permanently and the earnings are seldom invested where they are of any benefit to the community.

Not only were these companies exempt from tax on the trees they harvested, they were allowed to destroy the forest resource. In 1922, the then Senator Hardtner campaigning for a "tax on natural resources severed from the soil or water" described the outcome this way

No man has a right to use his property or waste or destroy it to the injury of his neighbor. The owner of a large tract of timber has no moral right nor should he have a legal right to waste or extravagantly utilize the forest for his own enrichment by destroying the seeds of a commodity which could serve the future generations of the race.

It was six more years, long after the heyday of logging,

that the state passed a tax of 26 cents per thousand board feet



Dr. Paul Keddy PhD

CONCLUSION

Dr. Paul Keddy's report on saving the Louisiana coast

(EDITOR'S NOTE: Biologist Dr. Paul Keddy was kind enough to preview his upcoming book, "Water, Earth, Fire: Louisiana's Natural Heritage." in last week's edition of The Times. Through a newspaper layout error, the conclusion was omitted, but is published below. Dr. Keddy's article is a follow-up on The Times' recent history involving the Ponchartroula cypress boom and the discovery with John Dahmer of a 100-acre wood of virgin cypress.)

The average citizen of Louisiana gained little from this exploitation. More than a thousand years of forest growth had been exhausted within a few decades, another thousand would be required to replace it. By 1924, even the Louisiana Red Cypress Lumber Company in Harvey, once the largest cypress mill in world, was liquidated and replaced in 1927 by the Florida-Louisiana Red Cypress Company whose sole purpose was to sell the remaining stock.

The most obvious effect of this logging was the complete removal of the bald cypress trees. Along the western swamps of Lake Pontchartrain, for example, one can see marshes that still have stumps, dead knees, and the occasional cypress trees

as evidence of the carnage that took place between 1870 and 1920.

Removing the trees caused other changes in the land. These changes often blocked regeneration of the forest, and worse, accelerated subsidence in many ways. The pullboat ditches changed the water flow, likely allowing salt water surges to flow back into the wetland. Salt water will kill cypress trees.

Those same drainage ditches may have lowered the water table, allowing the soil itself to decay, and further lowering of the land. Finally, roots and leaves from mature cypress forest used to contribute to building the land up (several inches each decade). With the forest gone, this process slowed or stopped. Pullboat logging, therefore, not only removed the forest, but permanently changed the physical nature of the landscape. It was nothing short of a disaster for the coastal wetlands of Louisiana.

It is possible that our cypress forests might have been able to recover from all these problems had it not been for another simultaneous disaster: the construction of levees on the Mississippi River. For thousands of years, spring floods had carried both sediment and nutrients into the cypress swamps. Sediment would build the land up each year. Nutrients would fertilize the trees, and increase the rate at which they could build the land up too. The levees shut down both of these vital processes.

Swamps that might have been sustainable (that is, able to regenerate after logging) became unsustainable. Biologists now agree that it is vital to restore spring flooding to the swamps, and indeed the entire coastline. This will require large fresh water diversions into areas like Lake Maurepas and Lake Pontchartrain.

The forests need spring floods large enough to carry sediment and nutrients. Lacking these, the water is likely to take back much of the coast.