

# A HISTORICAL OVERVIEW OF THE FORESTRY INDUSTRY IN CLAY COUNTY

By

Don C. East

(Member, Clay County Forestry Planning Committee and The Alabama American Tree Farm Committee)

## BACKGROUND.

Although this article centers on Clay County, it is generally representative of the forest industry history in most of Alabama's Piedmont area counties.

The forestry industry has been in the foreground in Clay County from the earliest times. Although it had had its ups and downs, it has been an industry that most Clay Countians have relied upon for at least a portion of their livelihoods. Over time, the forestry industry in the county has evolved into a wide variety of jobs centered on forest products.

Today, sectors of the forestry industry in Clay County vary from the forest landowners growing the trees, to the various crews harvesting the trees, through the intermediate wood processors, to the finished wood products, and finally to those that provide services supporting the forestry industry.

Because of space limitations, this overview will be general in nature and touch only on the high points of our forestry industry from the pre-Clay County era (before 1866) to modern times.

## THE EARLIEST CLAY COUNTY FORESTRY OPERATIONS

The first use of forestry products in the area were the notched logs and wood shingles used to build the crude frontier log cabins of the earliest pioneer settlers. Later, as the civilization advanced, the next forestry operations in what would become Clay County were the two-man pit saw operations. The men used a long saw with handles on each end. One man worked in a deep pit and the second one on a wood platform above the log in a push-pull sequence to saw the rough boards. Using this technique, a team could produce only about 100 board feet of rough lumber per day.

## THE WATER-POWERED MILLS

After the Creek Indians and other Native Americans were removed to the west in the 1830s and 1840s, there was a flood of pioneer settlers to the area. These early pioneers soon learned to harness the power of the numerous fast-flowing streams in the region. They built numerous water-powered combination mills, one approximately every five

miles along each major road. The East family of millwrights built the majority of these combination mills in what would become Clay County.

These combination mills were powered by water flowing from a dam to turn a large water wheel. The wheel could be an overshot, undershot, or side-wheeler according to the lay of the land and the nature of the water flow. A long metal or wooden shaft protruded horizontally or vertically from the water wheel into the mill building. Wooden or metal circular pulley wheels were attached along the shaft. Leather belts placed on these pulleys would provide the power for the various equipments. The water to the wheel could be regulated by a wooden door which shuttered the entrance to the wheel. These early mills contained equipment to saw lumber, grind corn or wheat, gin cotton, and other functions.

The saw mill portion usually consisted of a vertical blade saw that moved up and down to saw the lumber. A customer could either pay cash for the milling service performed or pay the operator a share of the product, called a toll. The earliest of these water powered mills used only a single blade to saw limber, operating on the down stroke only. These mills could produce approximately 2,500 board feet of lumber during a 12-hour day. As time passed, those mills with sufficient water flow were upgraded to multiple saw blades, usually two to four blades, which increased the production rate significantly. The earliest circular saw blades were introduced in the 1850s; however, only the stronger stream flows would produce enough horsepower to operate these more efficient circular saws.

The logging portion of these early sawmill operations was done by men using axes to fell, limb, and buck (cutting the log into sections) the large trees. The logs were then skidded out of the forest by teams of oxen on two-wheel carts to a loading deck. There, the logs were loaded onto four-wheeled ox carts for transportation to the mill.

Although the vast majority of these water powered mills were replaced by steam and later combustion engine power, some of them continued to grind grain (mainly corn) up until the 1960s and beyond.

## THE STEAM ENGINE

By the 1870s, steam engines were perfected and put into service by the forestry industry in the new County of Clay. These mills, using the circular saw blades, allowed significantly greater lumber production and greater flexibility in selecting the locations for the saw mills. Although these steam engine-powered mills did not have to be located on a larger stream, they nevertheless had to be near a fairly significant supply of water.

During this same period, the two-man cross cut saw replaced the axe for the felling and bucking operations at the logging site.

## THE COMBUSTION ENGINE

When the combustion engine came on the scene around the turn of the century, the "peckerwood sawmill" era began in Clay County. The portable sawmills also were known in some areas as "Doodlebug, Groundhog or Whippoorwill" mills. With the combustion engine powering the mill, a site for the equipment could be selected more for the lay of the land and access to a public road than for a source of water. By the 1930s,

small gasoline engine powered mills were the norm. The larger of these Peckerwood sawmills could produce in excess of 10,000 board feet of lumber per day.

By now, large horses and mules had replaced the oxen teams in the skidding of the logs to the loading decks. The transportation of the logs to the mill was done by log trucks with combustion engines.

The numbers of peckerwood sawmills in the county rose steadily from the early 1900s, peaked in the 1930s and 1940s, and then began a slow decline until their final demise in the 1960s. At their height, it is estimated that over 20 peckerwood sawmills were operating in Clay County.

After purchasing a tract of timber, the peckerwood sawmill operator would move the transportable mill equipment to a central point on the tract, usually near a public road, and set up the operation. At the sawmill site, a sloping hillside was usually available so that the logs brought from the forest could be rolled down the hill by a man using a cant hook and be placed onto the sawyer's carriage. The carriage ran on a short section of track and looked somewhat like a miniature flat-bed railroad car. The carriage contained two sets of blocks that held the log in place on the carriage as it was moved slowly through the large circular saw. There was a long lever on the carriage that was used by the sawyer to adjust the logs horizontal movement toward the saw, and thus control the width of each board that was sawn. The sawyer was the key man in the operation of a peckerwood mill because he must have an experienced eye to determine exactly how to cut each log for maximum efficiency and the least waste. A computer scanner system performs this operation in today's sawmills. The log was turned by a man using a cant hook after an initial cut was made on each of the four sides. This produced a square or rectangular timber that would then yield the individual boards of lumber. In the days when the large long leaf pines were plentiful, the log would normally be sawn down to a 12 by 12 timber so that all the remaining wood would be near the heart where the majority of the pine pitch was located. This "heart pine" lumber had an extreme longevity over any other type of wood. This is evidenced today by the numerous old homes in Clay County made of heart pine that are still standing after 150 years or more.

The sawdust from the saw would be transported to an ever-growing sawdust pile with a rotating chain mechanism. The waste slabs would be placed in a slab pit to be burned or used by the locals for firewood. Today, all the milling waste is used for collateral products or to produce energy.

At the end of the carriage run, there was a set of metal rollers to receive the lumber board and continue it through the edger. The edger removed the rough edges of the board and sized it to a standard width. The board would then go over another set of metal rollers to the end of a raised ramp where it would be loaded onto a flat-bed truck and transported to a consolidation/lumber yard. After the planing and kiln drying, the lumber yard would then sell the lumber to wholesale building supply stores.

During most of this peckerwood sawmill era, the land was purchased along with the standing timber. After the timber was harvested from the tract, many of the peckerwood saw mill owners simply abandoned the land, which they considered worthless. This was well before the concept of reforestation had been thought of. The land would subsequently be sold for delinquent taxes at auctions on the county courthouse steps. However, some of the more foresightful of these mill owners continued paying taxes on

the land and maintained it in their inventory. After successive generations, this foresight resulted in several Clay County families having significant forest land holdings today.

In the logging portion of the peckerwood operations, the cross cut saw was replaced by the combustion engine chain saw in the 1940s.

During World War Two there was a labor shortage because of most able-bodied men being in the armed forces. The United States government recognized this problem and provided cheap labor from German prisoners of war as laborers for some of the peckerwood operations. This kept the crucial lumber supply going to feed the war effort. These German POWs were housed at a camp near Dadeville and brought by bus to the mill site each day, accompanied by a guard.

In addition to the small and portable peckerwood sawmills, there were six larger sawmills operating at fixed sites in Clay County at the end of World War Two, four in Lineville, and two in Ashland. There were also several consolidation yards and/or kiln dry/planer mills in the county. The planer mills took the rough lumber from the peckerwood and fixed site mills and planed the surfaces smooth and kiln dried it for market.

## THE KAUL LUMBER COMPANY OF HOLLINS

The repeal of the Southern Homestead Act of 1876 opened up an orgy of public land sales in the South. Timberland could be purchased from the United States government for \$1.25 per acre. During the turn of the century lumber boom, these prices slowly rose to around \$5.00 per acre.

During the lumber boom, an enterprising individual could see that the peckerwood mills were not keeping up with the demand for lumber. Taking advantage of this exploding need, especially for the superior long leaf pine lumber, John L. Kaul of St. Marys, Pennsylvania came south of a tour of the lumber industry in 1888. While on this tour, he invested in the Sample Lumber Company of Hollins in southwestern Clay County. After serving as the secretary and treasurer of the company, he and his father, Andrew Kaul, bought out the other stock holders and formed the Kaul Lumber Company. Later the Kaul Land and Lumber Company was incorporated. Soon, the Kaul Lumber Company became one of the largest producers of lumber in the state. The Company established a series of narrow-gauge railroads with an extensive company system of over 75 miles of track. These logging trains brought the logs from the forest to the mill. The finished lumber was then shipped out to markets on the standard-gauge Columbus and Western Railroad that was built through Hollins in 1888.

The operations of the Kaul Lumber Company caused a significant growth to the hamlet of Hollins. During its heyday, it is said that more money passed through the Hollins post office than any single post office in America. In its time, the Kaul Lumber Company plant operation at Hollins cut between 80,000 and 100,000 acres of timberland in the area. The facility burned and was rebuilt in 1908. Then the plant was closed for good in 1911 when a new and even larger plant was built at Kaulton near Tuscaloosa. The Kaul Lumber Company, with headquarters in Birmingham today, still has sizeable timberland holdings in the area. The Kaul giant did not significantly suppress the wave of peckerwood mills that continued to operate in Clay County through the end of World War Two and somewhat beyond.

## THE ARRIVAL OF THE PAPER PULP INDUSTRY.

After the decline of the peckerwood sawmills in Clay County, there came a new need for the smaller diameter timber. The building of several paper mills in the state caused a rising demand for what we know as pulpwood.

This demand spawned a wave of short wood (5 foot length) producers. These operators cut the trees with chain saws and manually loaded the sticks onto various size pulpwood trucks. Later, the invention of the boom loaders somewhat eased the very difficult manual labor of the pulpwooders. Everyone, from the farmer with a small wood lot to large multiple-crew producers, got into the pulp wood action in Clay County and remained active until the early 2000s. At that time the larger tree-length logging operations and changes in pulp mill debarking equipment put the short wood operators out of business. Now, to provide the pulpwood product, the larger operators sort out the smaller diameter trees from the other products they harvest and transport them to the pulp mills separately as tree-length loads.

## AN ERA OF REFORESTATION BEGINS.

The advent of the pulp wood boom also brought on another new aspect of forestry to Clay County – the idea of reforestation. Up until the 1950s, when the peckerwood sawmills and timber giants such as Kaul harvested the timber on a tract, they simply left the land in a barren, ugly mess for Mother Nature to reforest over time. However, this type of “natural” reforestation is usually not efficient, resulting in mostly low grade, less desirable types of trees. With the purchase of thousands of acres in Clay County by large paper manufacturing companies such as Kimberly Clark, Inland Rome and others, came a new notion - artificial reforestation. Now, after a timber harvest, a reforestation crew would shortly arrive to replant the tract with pine seedlings for the next crop.

Even the local privately owned forest land owners soon bought into the reforestation activity. The advent of government and state cost share assistance programs made it possible for even low income private land owners to become involved in reforestation. With a strong timber market and the efficient reforestation movement, the price of Clay County forest land began a dramatic rise in the early 1970s. Today, along with its natural stands, Clay County has an abundance of planted plantation trees that has brought the volume and density of the Clay County forest back to pre-pioneer day levels.

## THE MODERN AUTOMATED LOGGING OPERATIONS

The demand for forest products continued strong in order to feed the paper, oriented strand board (OSB), engineered wood, chip mill, pallet, sawmill, cabinet, furniture and truss factory industries in the county and nearby. With this increased demand came a need for a more efficient method of logging. This need brought about a new generation of equipments and methods starting in the 1970s and 1980s.

First, the huge and expensive feller-bunchers were brought on the scene to fell and bunch the trees into bundles. This equipment largely replaced the man on the ground

with a chain saw. Next, the equally huge and expensive skidders replaced the horses and mules in moving these individual larger trees or bundles of smaller trees to the loading deck. Then, the grid and boom delimiters decreased the need for a man using a chain saw in removing the limbs from the trunk of the trees. Finally, the boom loading cranes replaced the manual methods of loading the logs onto the tree-length truck trailers.

The production rate for a well-trained crew using this modern equipment was a quantum leap over the old peckerwood system days. These crews could quickly and efficiently thin or clear cut a tract of timber according to the owner's desires.

In the case of multiple ages and species of trees on a tract, the boom loader operator separates the delimbed trees into piles according to size and species. These various categories of trees are then loaded separately onto trailer trucks to be transported to various types of mills or plants. Some producers do not operate their own trucks for the transportation of the logs. Instead, they find it more efficient and cost effective to contract out the hauling to private trucking companies.

The logging operation has always been a dangerous occupation. In 1913, the Red Cross estimated that every year in the forestry industry of the United States, nearly 2,000 workers were killed, almost 8,300 permanently disabled, and over 70,000 temporarily disabled. One company reported over 2,500 sawmill and logging related injuries requiring hospitalization among its approximately 4,500 employees from September 1912 to September 1914, for an annual accident rate of more than 25%. Although not as serious today, working in this industry remains a dangerous occupation. Logging workers have an accident rate 30 times that of the national average. With falling trees and the hazards of moving logs and heavy equipment, this profession requires a tough breed. Even with its dangers and hard work, it is said "sawdust gets in your blood." Many Clay County families such as the authors' are now in their seventh generation of loggers and saw millers. The hard work and dangers of this profession are currently being dramatized on television's History Channel through programs named "The Ax Men" and "Swamp Loggers."

## POSSIBLE NEW DEVELOPMENTS IN THE INDUSTRY

Like any industry, the forestry industry has undergone major changes over time. These changes are based on technology, demand, and environmental requirements. This evolution continues today with several new and exciting developments that will sustain the forest industry in Clay County.

During the late 1900s and the early 2000s, the greatly elevated forest land prices in Clay County motivated many of the industry forest land owners such as Kimberly Clark, Union Pacific, Inland Rome and others to divest themselves of thousand of acres to satisfy their stockholders. This land was quickly gobbled up by private individuals, LLCs (Limited Liability Corporations), and REITs (Real Estate Investment Trusts). The results are, other than the 66,800 acres in the Talladega National Forest, over 95% of the remaining forest land in Clay County is now owned by private non-industrial entities. This means, as a group we now have more private citizen voices to ensure we receive fair and equitable national and state forestry legislation.

The European Commission (EC) recently ruled that at least 20% of their energy must come from renewable resources. Since most of the European countries have little forest

land of their own, this has caused a major jump in the demand for our wood chips and pellets that are shipped out of ports such as Mobile.

The push for the use of renewable resources to produce energy has also initiated research in the production of cellulosic ethanol for use in combustible engines. Cellulosic ethanol is produced by using bio materials such as timber harvest waste, small diameter trees, and agricultural crops such as switch grass to produce fuel. The term cellulosic ethanol does not include corn as a raw product. With the spiraling price of corn now impacting the grocery bill and with weather conditions impacting the corn crop yield, an increased interest in cellulosic ethanol is probably around the corner.

Finally, an emerging carbon sequestration program designed to improve our air quality has been developed and is being considered by both federal and state governments. This program penalizes industry for the production of carbon dioxide pollution. The system purchases carbon credits from forest land owners on the open market and makes them available for purchase on a ton (of carbon stored) basis to the industry entities on the stock exchange as carbon credits. Vigorously growing trees are the major carbon sequestering organism on the planet. This program as it is currently planned has some undesirable features. Should these aspects be successfully worked out to all parties' satisfaction, at some point in the future carbon sequestration may take on new life. Should the program mature, forest landowners may be paid a bonus just for growing trees. Forest landowners have always enhanced the environment through providing clean water, a supply of oxygen, soil stabilization, improved wildlife habitat and aesthetics - and all this time we have been providing these services for free! It's about time we were rewarded for some of these actions!

## THE CLAY COUNTY FOREST INDUSTRY TODAY

For many Clay County resident's, a significant portion of their income over time has been from the forest industry. Anyone doubting this has to simply take a look at the current forest industry operations based here.

First, we have the growers. These are the numerous private landowners who receive income from their forest via the sale of forest products and the leasing of their land for hunting and other recreation.

Next, there are the producers that harvest the trees and start them on their way to market. There are at least 12-15 logging crews in the county, each employing from 3 to 10 men. Working with the producers are the contract trucking firms, hauling the logs to the mills. Then, there are the heavy equipment operators who construct forest roads and stream crossing for the producers and forest land owners.

Next, there are the plants using the raw forest products to make a semi-finished product. In this category there are the two county sawmills, Shaddix and Wellborn.

Then, there are those companies using the finished wood to build products such as Welborn Cabinets, Tru-Wood Cabinets, Integrity Cabinets, Well Made Cabinets, Welborn Cabinet Factory Outlet, Three Dimensions Woodcraft, and the John-Co truss plant.

Next are the managers of industry and private forest lands such as Bowater and Cahaba that operate in the county.

And finally, there is an army of support personnel assisting landowners and producers in the industry by providing forestry-related services such as consulting foresters, surveyors, heavy equipment mechanics, and federal (Talladega National Forest) and state (Alabama Forestry Commission) personnel involved in fire suppression and forest landowner assistance.

There is another major benefit from the forest lands in Clay County, aside from growing a crop of timber products. These well-managed tracts are also providing excellent wildlife habitat for our deer, turkey and other game animals. This good stewardship is reflected in the Alabama Fish and Game Commission's recent ruling to harvest does during the entire Clay County deer season. These excellent hunting opportunities add a considerable amount to the county's economy. A recent study shows 16,871 jobs in the state are supported by hunting activities. This study also shows a whopping \$799,308,993.00 in total retail sales are generated by hunting. Further, \$85,048,992.00 of this total was generated by non-resident hunters. Good forest land management and wildlife management go hand in glove. If you are managing your forest land properly for timber production, you are also doing the right things for wildlife habitat.

We are currently experiencing a downturn in our forest economy caused by the mortgage fiasco and a related housing surplus. We are also experiencing competition from Canadian, South/Central American and Asian wood products. However, we have experienced similar downturns in the past, and this too will pass. The one forest product that we have here in the South that none of our foreign or non-regional competitors can produce is southern yellow pine. Southern yellow pine is a generic term encompassing primarily the loblolly, long leaf, short leaf, and slash species of pine. No other pine or softwood species has the structural strength and longevity of southern yellow pine and it grows nowhere else on this planet other than here in our own sunny South. This means, as long as there is a demand for southern yellow pine, we are the only ones that can satisfy it.

## SUMMARY AND CONCLUSIONS

From its early beginnings and continuing into the foreseeable future, Clay County has "sawdust in its blood." Although there have been economic boost from mining operations in the past, and there is currently significant economic gain from the cattle and chicken industries in the county, the one persistent economic mainstay is now, and always has been, our beautiful and productive forests.

Clay County has a healthy and well managed forest. This is explicitly evident by the large number of district, state, regional and national forestry and wildlife management awards won by our private land owners and our youth in the 4-H and FFA.

However, we cannot rest on our laurels. Breathing down our backs is a small, but powerful group of ill-informed Americans usually know as "extreme environmentalist." With their large budgets, these groups have been very successful in their efforts to put the American northwest forestry industry out of business. These groups have since turned their attention to the Southeast with the same goal in mind. Unless our Southern forest industry can show that the forest lands are being properly managed for multiple use and we are doing it in an environmentally friendly way, these extremist will seek any excuse

to legislate us out of business. In this regard, we should be reminded of a quote from Thomas Jefferson: “That government is best which governs the least, because its people discipline themselves.” Therefore, if we discipline ourselves to be good stewards of the land and work together as a group, the government will be discouraged from trying to do our job for us. We must remain informed on issues relating to the forestry industry and use our considerable collective voice to fight ill-advised government forestry regulations and taxations. The best method of remaining informed of legislation affecting your timberland, having a source of excellent educational articles on timber and wildlife management, and maintaining a network with other like minded private landowners is to become a member of the American Tree Farm System. 3,157 Of your fellow Alabama private landowners have already made that choice, and currently Alabama has over 3.6 million acres enrolled in the Tree Farm System. This is the largest number of Tree Farm certified acres of any of the states.