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BRUNSWICK COUNTY'S GREATEST PRODUCER OF NAVAL STORES IN THE TAR HEEL STATE

by
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From the beginning of the first civilizations, sea trade and sea power were dependent on wooden hulls, tarred rigging and sails, so pitch and tar were as valuable as silk, pearls and precious metals.

For thousands of years, the resinous trees of Europe supplied the navies of the world with naval stores, but by 1609 these products were about exhausted. Consequently, when James, King of England, issued the first charter of the Virginia Company of London to settle in America, May 23, 1609, and to colonize that part commonly called Virginia, he urged the Governor to employ the settlers in making "pitche, tarr, sope, steel, and iron, in fishing for pearle, sturgeon and cod".

The naval stores industry is the oldest in the world. The Bible records that Noah was commaned by the Lord, "Make thee an Ark of gopher wood; rooms shalt thou make in the Ark, and shall pitch it within and without with pitch."

The ancient Egyptians made boats and later sailing ships by lashing together bundles of reeds to form hulls which then were made water-tight with pitch.

One of the earliest acts of the Pilgrims was to request in 1626 that men "skyful in making pitch" be sent to them from England. Their countrymen to the South, namely Virginia, had been at this business 14 years before the Pilgrims even sailed from England, February 2, 1620.

Sir Walter Raleigh describing the North Carolina coast to Queen Elizabeth in 1584 referred to the immense forests of pine, "the tree that yielded rosin, pitch, tar and turpentine".

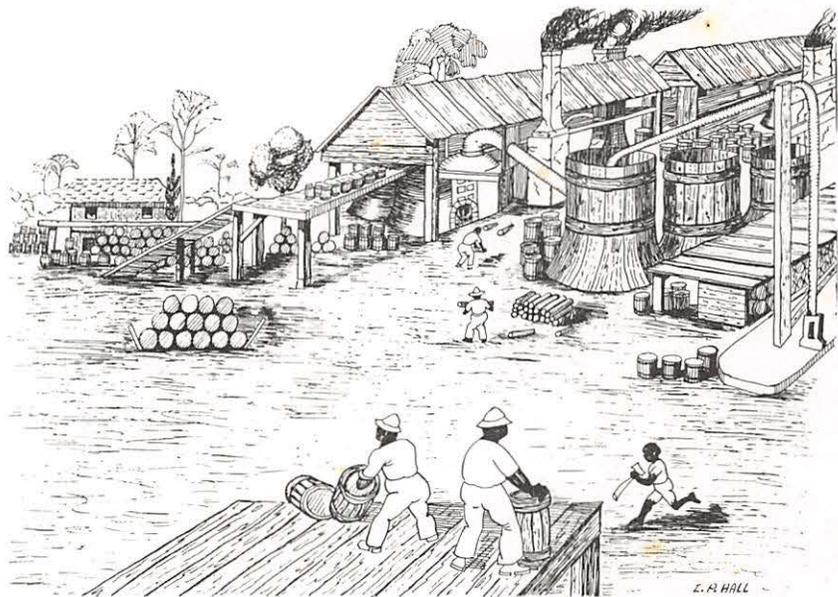
The method of tar burning that still prevails in South Carolina, Florida and Louisiana has changed very little from colonial times.

First a hold or depression is made in the ground, its sides sloping towards the center, from which there is placed a pipe of wood extending two feet beyond the circle of the proposed kiln. Light wood is then stacked around the hole in a conical shape, and covered with clay, or dirt to make a kiln.

As the pine tar flows from the burning wood, it is caught in the depression in the ground from which it flows through the pipe into a barrel set in the earth at a lower level.

About 1665 when colonists began to settle in North Carolina, they soon discovered that the primeval forests of Southern yellow pine, or better known as long-leaf pine, (*Pinus Paulstris*) was a better source of gum than the pitch pine of New England.

In the early days of North Carolina, the Sandhills bordering the Cape Fear carried one of the greatest and most distinctive forests in the world. Here stood hundreds of thousands of trees with trunk diameters of two to three feet, their boles rising 60 to 70 feet without



a limb, holding aloft a conical crown of evergreen branches, each ultimate one ending in the highly characteristic mass of long-needled leaves. The colorful orange bark, broken into large plates, together with the sienna forrest floor of fallen needles, made it one of the most majestic forests to be found anywhere.

The fact that this forest grew on the most sterile extensive soil in the eastern United States adds to its remarkable character. Today, hardly a fully matured tree may be found in the Cape Fear area. The white man has boxed and cut this sandhill forest to extinction. Following many lumbering operations the tremendous amount of slash carelessly left was the basis of great fires which destroyed what smaller trees that remained.

Taking the place of the pine, the fork-leaved blackjack oak, tangled undergrowth and wire grass now have taken over vast areas of the sandhill country (From "The Story of Fayetteville" by John A. Oates, 1950)

The raw turpentine used in the manufacturing of naval stores is extracted from the pine tree that lined every creek, river and estuary in the coastal South Atlantic States.

A traveler in Brunswick County, N. C. in 1849 wrote: "At every turn in the road, I met Negroes with tools necessary to cut into the trees so that the turpentine might run out--and was surprised to hear the musical yodling which resounded through the woods in every direction. The makers of turpentine were a set of men who made themselves happy by this peculiar yodling as they passed from tree to tree, hacking each, until each Negro had finished his "task" which was to hack 10,000 trees, or boxes, once a week."

"There were few fields of corn to be seen anywhere, for the farmer was engrossed in the occupation of making turpentine.

Near every dwelling house was a cooper's shed where the rough barrels were made for containing the rosin. When the barrels were filled, they were hauled to the nearest boat landing."

The box method of gathering turpentine was very destructive and wasteful, it being to chop into the base of the tree a cavity, or box, to catch the resin, or rosin, that flowed from the V-shaped scar hacked in the surface above. This scar was roughly two feet wide and several feet long. This method in a very short time kills the tree.

In 1901, Dr. Charles Herty introduced the Cup System. Instead of chopping a box and disfiguring the tree, Dr. Herty used a hard clay pail, or cup. In later years, an oblong tin receptacle was used. This method is not fatal to the tree.

The hacking operations began, usually, from March 15th and lasted until October or November.

Turpentine is a resinous juice, ole-resen, and when it is first extracted it is crude, being 75 to 90 per cent resin and 10 to 25 per cent oil.

In the early years, the crude iron retorts that were used in the disillation process gave products of poor quality, due to the fact that no water was added to the gum from the cast iron.

In 1834, copper stills were introduced and these stills were partly inclosed by brick work and the heat applied directly from wood fires. Water was then added to the gum and when the heat was applied, a separation of the gum took place. The turpentine was put in barrels, and melted rosin was drawn off from the base of the still and passed through strainers of cotton batting.

In 1850, North Carolina and South Carolina accounted for more than 95 per cent of the total American production.

Brunswick County led all other counties in North Carolina in production.

The Carolinas, however, did not keep up this yield due, without a doubt, to the firing and destruction of the beautiful pine forests of these States by the Union officer, Gen. William T. Sherman, in his infamous "March to the Sea" during the "War Between The States."

In 1896, the annual valuation of naval stores from the 15 coastal counties lying south of the Neuse River was \$1,500,000.

The output per man is much lower than it was a century ago due to the scarcity of large stands of pine, and also large trees. The average stand of today only have 20 to 30 working trees which are 10 to 11 inches in circumference, as compared to the primeval forests of the past.

In recent years, a new industry has sprung up. It was found that in the pine tree stumps and downed timber, the sap had dried and was stored up. One process to acquire this dried sap is to put the lightwood or dead wood, in a retort and by sweating, or a steam process, both light and heavy oil, or pine distillate, is procured.

Another process is to grind up the wood into pieces the size of an ordinary match stick. A solvent is then pumped through these chips. The liquid is then processed for the various grades of oils. From the light oil is made pine oil, wood turpentine and dispentine. The heavy oil, after being refined, is used in pharmaceuticals, plasticizers, insecticides, soaps, cleaners and other commodities.

In recent years, timber and pulp wood companies have improved and expanded efforts to provide a continual supply of pines. Some of them are leasing their timber tracts to experienced turpentine operators who will manage them properly before the final harvesting, and in that way, North Carolina woodlands will yield pine tar for the Tar Heel State.