

The Living History Classroom



Published By Tryon Palace Historic Sites & Gardens

Spring 2006

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Spring 2006

A Look at

Naval Stores

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Tar Heels Rule!

North Carolina in the 18th Century: World Economic Power

Naval stores were as important to nations in the eighteenth century as petroleum products are today. Without naval stores, a nation's military and commercial fleets were useless. Until the nineteenth century, the greatest navies in the world were kept afloat by the products of the pine forest.

In 1584 English explorers reported to Sir Walter Raleigh that they saw "trees which could supply the English Navy with enough tar and pitch to make our Queen the ruler of the seas."

Tar was derived by slow burning pine-wood in a kiln. Pitch was made from tar boiled in a kettle. Spirits of turpentine and rosin were derived from tapping the gummy resin from live trees. Other naval stores included planking, masts, canvas, ropes, and trenails – all essential to shipbuilding.

After a ship was framed and caulked, the underside of the hull would be coated with pitch, making it watertight.

Ropes were exposed to corrosive salt air and saltwater and had to be treated with tar. Yarn

was dipped into a kettle of boiling tar. The yarn needed to sit in the tar long enough for the tar to penetrate. The yarns were then fashioned into rope. Tar and pitch were also essential in the maintenance of a ship at sea.



Eighteenth century ships were dependent upon naval stores from North Carolina.

Depending on the length of the voyage, a ship would need to carry from six to twelve barrels of tar. If the ship sprang a leak, it would have to be caulked with pitch.

Shipments of tar and pitch, and some small cargoes of turpentine spirits, were regularly sent to England from its colonies in New England, Virginia, and the Carolinas. North Carolina produced 70 percent of the tar exported from all the American colonies. For 150 years, from 1720 to 1870, North Carolina was the greatest producer of naval stores in the world. ©

A Note to Teachers

The mission of Tryon Palace Historic Sites & Gardens is to educate the public about North Carolina's past. This publication is intended as a resource for students in the 4th and 5th grades as well as their teachers. It may also be useful to 8th grade students studying North Carolina history. We have designed the articles and activities to be photocopied and given to your students. We have also listed websites relevant to the articles. We would like to hear your comments on our format, how you use the *Living History Classroom* with your students, and any ideas for future issues. Please email us at our website with your comments.

On the Web!

You can now find the *Living History Classroom* on the Internet. To download additional copies, go to www.tryonpalace.org/publications and click on the *Living History Classroom* button.

How This Issue Can Help You...

Classroom Tips

Each article in this issue of the *Living History Classroom* has been designed to highlight topics spelled out in the North Carolina Standard Course of Study at the Grade 4 & 5 level, current to the 2005 objectives. For more information on curriculum standards, go to www.ncpublicschools.org/curriculum.

The state's many pine trees produced the resinous juices harvested for the manufacturing of naval stores.



Articles

Longleaf Pine Forest
4th grade: 6.01

Distilling Turpentine
4th grade: 7.01

A North Carolina Statesman
4th grade: 3.02, 4.05
8th grade: 3.07, 9.02

North Carolina State Song
4th grade: 3.02

North Carolina Toast
4th grade: 3.02

Development Of A Colony: Nature Driven
4th grade: 1.01, 1.02, 1.04
8th grade: 1.01, 1.06, 1.07

The Living History Classroom

is published twice each school year by Tryon Palace Historic Sites & Gardens and is available free of charge to schools and teachers.

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Graphic design by Marcia S. Kalayjian.

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Development of a Colony: Nature Driven

During the Proprietary and Colonial periods, the colonies existed to enrich Great Britain by producing raw materials and serving as markets for British goods.

Agriculture and forest products dominated the economy of North Carolina. The main agricultural products included tobacco, corn, wheat, rice, peas, flax, and dairy products. The mainstay of the colony's economy was based on the pine tree and its products – lumber and naval stores. For 150 years, from 1720 to 1870, North Carolina was the greatest producer of naval stores in the world. The naval stores were tar, pitch and turpentine.

North Carolina did not experience the economic growth that was enjoyed by her neighbors, Virginia and South Carolina. The colony was burdened with significant natural handicaps. Nature carved a jagged, dangerous coastline. The coastline was constantly changing, depending on the occurrence of hurricanes.

With one exception, North Carolina's rivers flowed toward the ocean. They emptied into shallow sounds rather than deep harbors. This added to the cost of transportation and impacted growth and trade. Only the Cape Fear River fed directly into the ocean.

Residents in the backcountry had difficulty getting their goods to market.

Farmers in the southern piedmont could direct their goods down the Yadkin, the Catawba and other rivers southward to Charleston where there was a deep-water port. Those living in the northern piedmont and Albemarle region would direct their goods overland to Virginia ports.

After 1750 efforts were made to develop overland links to meet the need of the rapidly expanding backcountry. As settlers established hundreds of farms, roads and bridges were built.

The ports of Edenton, New Bern, and Wilmington and the interior town of Cross Creek (now Fayetteville)

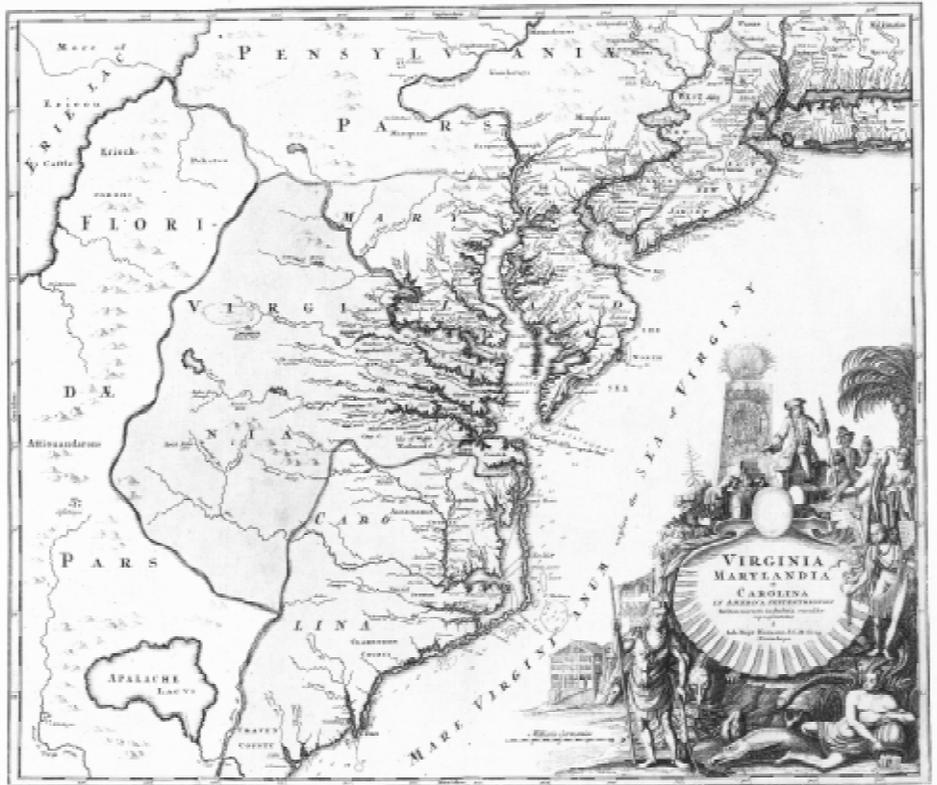


Plate 46. Johann B. Homann. Virginia Marylandia et Carolina. 1714.

Rivers flow to the sea. Unfortunately for the economy of eighteenth century North Carolina, her rivers, with one exception, flowed to sounds barricaded by barrier islands.

served as market centers. Merchants and planters were the elite of North Carolina's society. There were four main classes: gentry, small farmers and artisans, indentured servants and poor whites, and Negroes. The gentry included merchants, planters, public officials, clergy, lawyers and doctors. ☺

Distilling Turpentine

The longleaf pine forest made the state of North Carolina a naval stores kingpin. By 1840, North Carolina's ports shipped nearly 96 percent of exported turpentine and rosin.

Turpentine and rosin were the distilled products of the living tree. Turpentine was a year-round operation that began in winter.

First, the longleaf pine tree would be "boxed". This meant that a large pocket would be cut deep into the base of the tree. From March through October long shallow cuts called streaks would be made above the box with a sharp tool called a "hack". The gummy pine resin would run down the streaks and collect in the box.

Once every week or two, the resin, or gum, would be



A North Carolina Turpentine Distillery.

collected and taken to a still where it would be distilled into spirits of turpentine and rosin. In 1834 Scotch-Irish liquor makers introduced the copper still to North Carolina, a technological advance that was one of the few genuine revolutions the industry ever achieved. ☺

Tar Burners

Flat lightwood, or wood that was saturated with flammable resin, was used in tar kilns to make tar and pitch. Settlers also used saturated lightwood as torches.

Tar burners gathered lightwood and split it into kindling about two to three feet long and two to four inches wide. It was then stacked to perhaps fourteen feet high. The finished stack would look like an inverted cone, with the wood sloping toward the center. A gutter at the bottom of the depression conveyed the hot, liquid tar to the tar hole about six feet from the circumference of the kiln.



At this point, the tar burners covered the kindling with pine straw and sod, making sure it was airtight. They forced burning lightwood down through an opening on top of the kiln until it blazed up. Then they would partly cover the opening so that the wood would burn slowly and the tar was sweated out of it. The tar burners tended the kiln day and night for a week or more until the flow of tar ceased.

When it had stopped burning, the kiln contained charcoal. This was a valuable by-product favored by blacksmiths. ☺

Tar burners piled pieces of resin-saturated pine wood in mounds and sweated the tar out in slow-burning fires. (Courtesy North Carolina Division of Archives and History)

How North Carolinians Got Their Nickname: Becoming Tar Heels

There are several versions as to why North Carolinians are referred to as “Tar Heels”.

The earliest written use of the nickname “Tar Heel” was found in the diary of Second Lieutenant William A. B. Lowrance of the 46th Regiment North Carolina Troops in February 1863. He wrote “I know now what is meant by the piney woods region of North Carolina and the idea occurs to me that it is no wonder we are called ‘Tar Heels’.” The term “Tar Heel” did not exist prior to the Civil War. Prior to that time, North Carolina was called the “Old North State.”

“Tar Heel” was first an epithet and then a badge of honor during the Civil War. After one battle in which the North Carolinians failed to hold a hill, a group of Mississippi soldiers told them that they had forgotten to tar their heels that morning. On another occasion, it was the Virginians who had retreated. A North Carolinian told them that

Jefferson Davis was going to put tar on their heels “to make them stick better in the next fight.”

Following the Confederate success at the Battle of Reams’s Station, General Robert

E. Lee reportedly proclaimed, “Thank God for the Tar Heel boys!”

The first known published post-Civil War reference to “Tar Heel” was the sheet music printed in Baltimore in 1866 by William C. Miller titled “Wearin’ of the Grey written by Tar Heel.”

Perhaps the nickname can also be attributed to the fact that the naval stores industry was very important to the economy of North Carolina. While ladling tar into barrels, some tar would be spilled onto the ground. It stuck to the feet of the workers. The tar would then pick up a lot of pine straw,



“Tar Heel” was first an epithet and then a badge of honor during the Civil War.



which would be permanently attached until the tar wore off.

The correct spelling for the name is two capitalized words – “Tar Heel”, although the one-word “Tarheel” is often seen. ☺

For many decades, tar and other naval stores (pitch and turpentine) were the chief economic commodities for North Carolina.

A North Carolina Statesman: William Gaston

Wm. Gaston

William Gaston was born in New Bern on September 19, 1778. His father was killed when British troops raided New Bern in 1781 during the American Revolution. William was only three years old.

William attended school at the New Bern Academy. He was then accepted as the first student at Georgetown College, now Georgetown University. Ill health forced him to return to New Bern. When he recovered, he went to the College of New Jersey, now Princeton University. He was graduated at the head of his class.

After returning to New Bern, William studied law and was admitted to the bar in September 1798. He later entered politics as a Federalist. The Federalists supported a strong federal government, public support of internal

Gaston gained a national reputation for the *eloquence* of his speeches.

improvements, and a strong central bank. He served in the North Carolina Senate and the North Carolina House of

Commons. In 1813, he was elected to serve in the U.S. House of Representatives. Gaston gained a national reputation for the eloquence of his speeches.

After retiring from Congress in 1817, he practiced law in New Bern and reentered politics. He served in the North Carolina Senate and in the House of Commons. While in the senate, he framed the act that established the North Carolina Supreme Court. In 1833 he was elected by the House of Commons to serve on the North Carolina Supreme Court.

In his most famous decision, *State v. Negro Will* (1834),



William Gaston, author of "The Old North State," was born in New Bern, North Carolina in 1778 and died in Raleigh in 1844.

William Gaston ruled that a slave had the right to defend himself against an unlawful attempt of a master to kill him.

He was elected to the state constitutional convention in 1835 and was successful in having the religious test removed from the qualifications for public office.

One of William Gaston's most lasting contributions to his native state was the song, *The Old North State*, (see opposite page) that he wrote in 1840. It was adopted as North Carolina's official song in 1927. ©