

An Overview of the Yorktown Tobacco Press Project

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Motivation Behind the Yorktown Tobacco Press Project

The Yorktown Tobacco Press Project is an ongoing study of the history of commerce, industry and slavery in Yorktown from the Colonial Period to the late 19th century. The project was conceived by Superintendent Dan Smith of the Colonial National Historical Park and Walt Akers of the Twisted Oaks Foundation and is designed to inform visitors to the park about:

- the significance of tobacco as a cash crop in early America;
- the techniques used to produce tobacco and make it ready for shipment to Europe;
- the expansion of commercial regulation between England and the colonies, particularly regarding the quality and distribution of bulk tobacco;
- the demand for labor that tobacco production created and its subsequent impact on the slave trade.

This document provides a primer on the historical research that contributed to the project, the reasoning behind placing the tobacco press in the Colonial National Historical Park and the current state of the project.

A Thumbnail History of Tobacco in Virginia

Origins in Virginia

The tobacco plant was originally brought from North America to England in 1565 by Sir John Hawkins (Salmon). In England the taste for tobacco grew quickly and by 1610 the market demand for the product was immense. During this period, there was a pronounced preference for the

tobacco produced by the Spanish colonies in the Caribbean and Central America. In contrast, the Native Virginians produced and smoked *Nicotiana rustica* - a form of tobacco that was described by William Strachey, a member of the Virginia Council, as being "poore and weake, and of a byting tast." Consequently, the demand for Virginia tobacco was low.

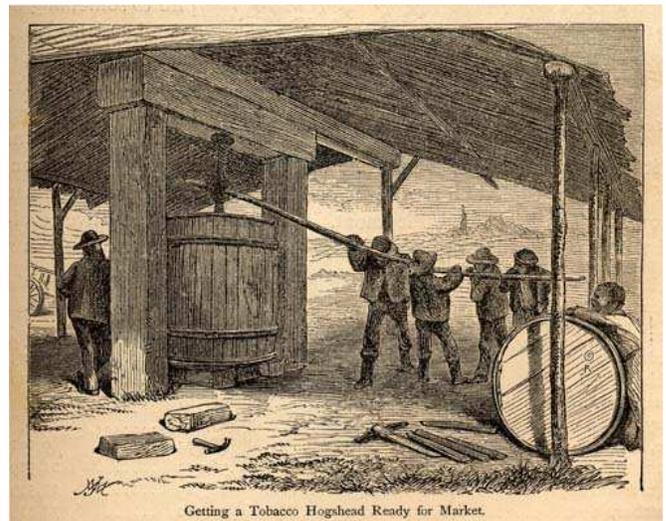


Figure 1: Illustration by King and Champney [1875]

Between 1611 and 1612, John Rolfe of Jamestowne began to experiment with the cultivation of tobacco in Virginia. Using seeds that were smuggled from Spanish Surinam (Northrup), Rolfe began to grow the more refined *Nicotiana tabacum* in Jamestown. In 1613, the first samples of Rolfe's new tobacco were delivered to England. The product met with great success and in 1617 20,000 pounds of Rolfe's tobacco was shipped to England - an amount that doubled in the following year (Salmon).

While the production of tobacco had proven to be a highly lucrative venture for the colony, the growth of tobacco had a severe impact on the quality of the soil. In a letter dated July 14, 1634, Governor John Harvey describes starvation in the

region which was a result of an inability to grow corn because of the excessive production of tobacco. Harvey remedied the situation “by ordering two acres of corn to be planted per pole throughout the Country and offenders to be punished with cutting up their tobacco” (Sainsbury). As a result of this restriction, by 1635 tobacco planting moved away from Jamestown as the planters migrated to land on the south side of the York River (Salmon).

This migration would mark the beginning of tobacco cultivation in and around Yorktown.

A Growing Concern

Concurrent with the emergence of tobacco along the York River, Edward Digges of London arrived in Yorktown and, in December 1650, purchased 1200 acres of farmland. (Tartar) On this estate, later known as Bellfield, Digges began to cultivate a milder, sweet-scented tobacco that was unique to Virginia (Salmon). Although the soil along the York River was sandy and of generally poor condition, it was uniquely capable of producing the tobacco for which Digges would become renowned. Notably, the *E.D. or E. Dees* tobacco produced in Yorktown demonstrated that differences in soil quality were at least as important to the resulting product as the tobacco varieties themselves (Salmon).

Edward Digges production and export of tobacco was so expansive, that in 1653 he purchased an additional 3000 acres in Gloucester County for cultivation (Tartar). This acquisition was characteristic of similar growth that was occurring across the region. During the mid to late 17th century, tobacco plantations expanded both north and west across Virginia. As more planters turned to tobacco as their primary source of income, the European market was quickly saturated with an overabundance of the product. This over production, coupled with wide deviations in the quality of the product, caused tobacco prices to fall dramatically in England. As a result planters were required to expand even further to maintain their profit margins.

During his second term in office, Governor William Berkeley tried to diversify Virginia’s agricultural production through silk farming, shipbuilding and mining iron ore, but met with

little success. (Chandler and Thames) The overproduction of tobacco continued and prices in England declined even further.

Rise of the Virginia Slave Trade

Early in the life of the Colony, the bulk of manual labor was performed by both freemen and indentured servants who earned their passage to the Colony by working for a contracted period for their *sponsor*. Notably, once indentured servants completed the prescribed term of service, they were free to pursue their own economic future. To this end, most of them entered the tobacco trade. The impact of the increased competition by small farmers in Virginia was worsened by a decrease in indentured servants arriving from England. By 1700, the pool of indentured labor had all but dried up and Virginia planters had to turn to another alternative... the African slave (Kulikoff).

The African Slave in the Tobacco Industry



Figure 2: *The Tobacco Rolling Road (Rakeman)*

During the Colonial Period, the average adult male could tend one to two acres of tobacco and an average child could manage three quarters of an acre (Salmon). As property holdings increased, the African slave, who was bound for life rather than a fixed amount of time, began to replace the indentured servant on plantations. By 1700, the number of slave laborers overtook the number of indentured servants in Virginia. Driven by the agricultural boom, between 80,000 and 100,000 slaves arrived in Virginia between 1698 and 1774, with the bulk arriving in the 1730s and 1740s (Salmon).

The Evolution of Tobacco Packaging

While the planting, harvest and processing of tobacco was a detailed process, the effort surrounding packaging and transporting the product were equally onerous. Two major issues dominated tobacco transport; the journey from the plantation to the domestic port, and the shipboard voyage to England.

Transport of tobacco to port was a relatively simple affair when the majority of plantations were along the coast. However, as tobacco plantations began to spread north and west across Virginia, transit along the rough dirt roads and through streams and creek beds began to have a negative impact on the product. The rolling hogshead remained a versatile tool for moving tobacco moderate distances, but as the distances grew planters turned increasingly to flat river boats (called batteaus) that could carry the hogsheads along the rivers and tributaries (Terrell).

The challenge of transporting a hogshead from a Virginia port to England was driven by both optimization and efficiency. Ships from the period were not yet rated according to the weight they could displace, but rather by the number of hogsheads or 'tuns' that they could carry – thus the term tonnage. (U.S. Navy) Recognizing that a good planter could produce more than 1000 lbs. of tobacco per acre, it was essential that he be able to move that product to market quickly. Likewise, the ship Captain's goal was to make each trip as profitable as possible. A large plantation would have the labor and facilities to plant, grow, harvest and package between 50,000 and 100,000 pounds of tobacco each year – if packed tightly, this amount could be transported on a single cargo ship (Grymes). As a result, packaging of tobacco became increasingly important.

In early commerce, tobacco was wound into ropes and then wrapped in canvas bundles that weighed around 100 lbs. each (Cotton). Notoriously inefficient and prone to damage, the use of these bundles did not last long. Soon after, the process of pressing tobacco into containers began to take form.

The earliest presses consisted of a lever (or series of levers) that compacted tobacco into wooden boxes for shipment (Billings). While an

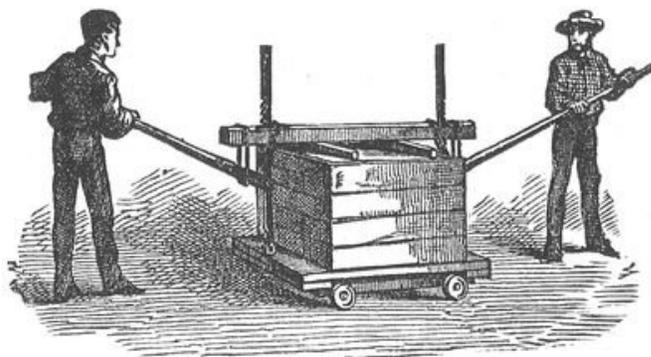


Figure 3: Early tobacco press (Billings)

improvement over bundles, these presses still lacked the capacity to quickly compact a large volume of tobacco into a form factor that was easily transportable by both land and sea. This is when the hogshead began to gain prominence in tobacco transport.

Although early hogsheads varied in size and shape until they were standardized to a size of 48 inches tall and 30 inches in diameter by the Virginia Assembly (1708), they typically had a volume of around 150 gallons. When packed tightly, the volume of tobacco that could be placed in a hogshead could be increased 4 times - resulting in a payload of 1000 lbs. of tobacco per hogshead.¹

This was essential for commerce because, while the Colony was producing an increasing amount of tobacco each year, the number and capacity of the ships transporting the product to market was still quite limited. By tightly packing the tobacco in casks, it was possible to optimize the cargo to transport the maximum amount of tobacco across the Atlantic on each trip. A ship from the period could carry between 50 and 100 hogsheads of tobacco (Grymes).

The hogshead not only had the benefit of holding a much larger volume of compressed tobacco, it could also be packed at the plantation where labor was plentiful and then rolled to the dock for shipment abroad. Because of the negative impact of water permeation on the tobacco, sealing a hogshead tightly was a paramount concern. Hogsheads that were rolled over long distances,

¹ Dry tobacco leaves weigh 13 lbs per cubic foot (Tapco). Given a standard hogshead capacity of 19.6 cubic feet, that volume of uncompressed tobacco would weigh 255 lbs.

particularly if they were driven through creeks and streams, would often arrive at the port in poor condition. This problem was worsened as settlements were established farther from the coast.



Figure 3: Hogshead being opened for inspection (Fry)

In 1730, a law entitled “An act for amending the staple of tobacco; and for preventing fraud in his majesty’s customs” was passed by the Virginia Assembly (1730). Designed to eliminate the export of poor quality tobacco which would further depress market prices, the law dictated that customs agents at every port were required to open each hogshead before shipment and test two samples to ensure they were without defect. In the event that the planter objected to this inspection, the entire hogshead was burned. Once accepted for shipment, *tobacco notes* were issued to the planters. These notes served as legal tender until after the French and Indian War when Virginia began to print its own currency (Salmon).

Was A Tobacco Press in Yorktown?

One of the prominent questions that must be addressed before adding this exhibit to Yorktown is would there have been a tobacco press in Colonial Yorktown. The answer is to this question is a definitive “yes”, and a more appropriate question might be “how many tobacco presses?”

As mentioned earlier, the branding on Edward Digges hogsheads was world renowned and a recognized “trademark” for his sweet, mild

tobacco. Because of the size of his plantation at Bellfield, it is likely that he had more than one tobacco press for processing his crops. Further, the small farmers throughout Yorktown that were producing smaller amounts of tobacco would need to combine their products for shipping into a single hogshead. This necessity would demand that a communal tobacco press be installed in the village.

Finally, following the Act of 1730 by the Virginia Parliament it became necessary for customs agents to open every outbound hogshead. In the event that a container was either faulty or damaged during inspection, it would be essential that a mechanism for repacking the hogshead be available somewhere near the port. Rather than maintaining a press at the Customhouse, it is probable that a community or *for-rent* press was made available to traveling merchants.

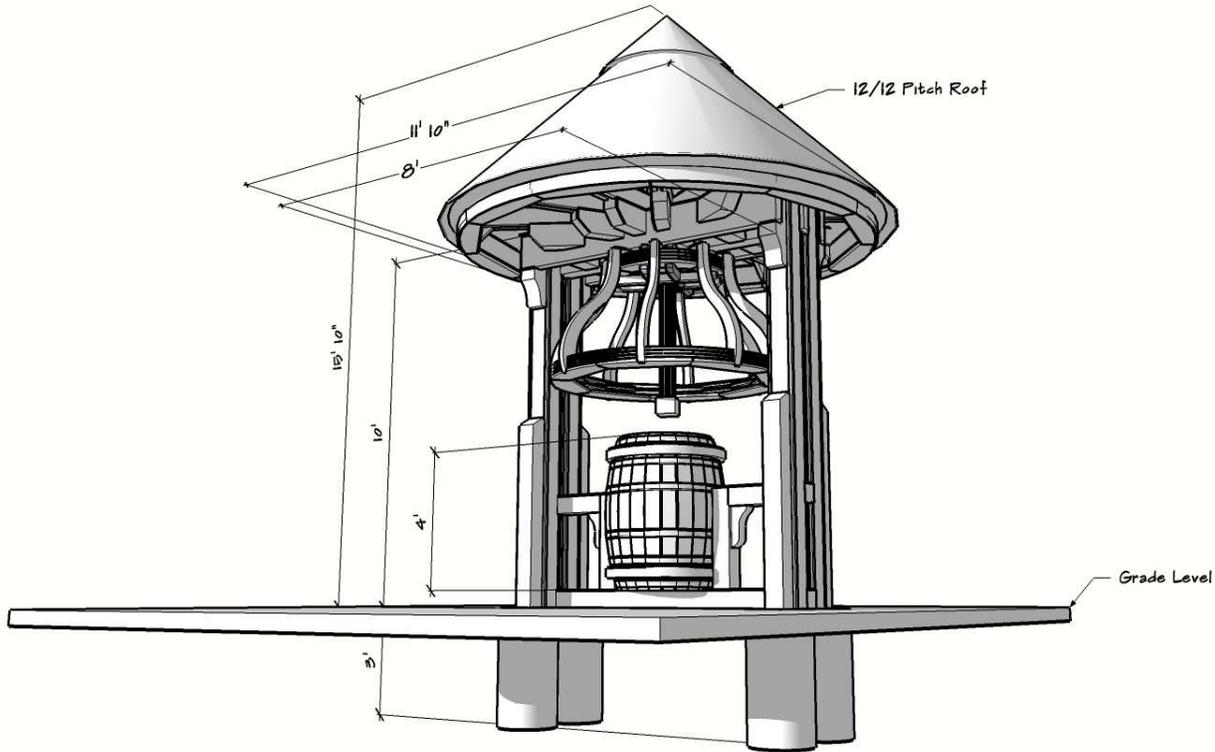


Figure 3: Dimensions of the Yorktown Tobacco Press Exhibit

The Design of the Yorktown Tobacco Press Exhibit

The Yorktown Tobacco Press design is a composite of many features that were present in architecture from the period. Because of the volume of tobacco that would have been produced and shipped from the port, it is assumed that a high-volume, screw driven press was used. The general dimensions of the press are shown in figure 3.

The press is nearly 16 feet tall and is held by 6x6 southern yellow pine posts that are set in a 3 ft. x 18 in. cast-in-place concrete. The roof is 12 pitch and has a diameter of 11 ft. 10 in. between the eaves. The upper beam of the tobacco press is 8 ft. wide and the hogshead is 4 ft. tall.

The materials used to construct the press (*shown in Figure 4*) are common to the area. All structural components are made from pressure treated southern yellow pine to ensure durability. The pine is coated with oil-based spar varnish to provide both UV protection and improved resistance to harsh weather. Moving parts are made from white oak, a favorite among boat builders because of its

strength, durability and resistance to water. Finally, the screw for the tobacco press is made from iron.

Notably, because the screw is a more modern vintage, the nut assembly is enclosed within the yellow pine beam to retain a historical appearance. The hogshead is made from white oak wrapped with rope and bound with yellow pine treads for rolling along the tobacco road.

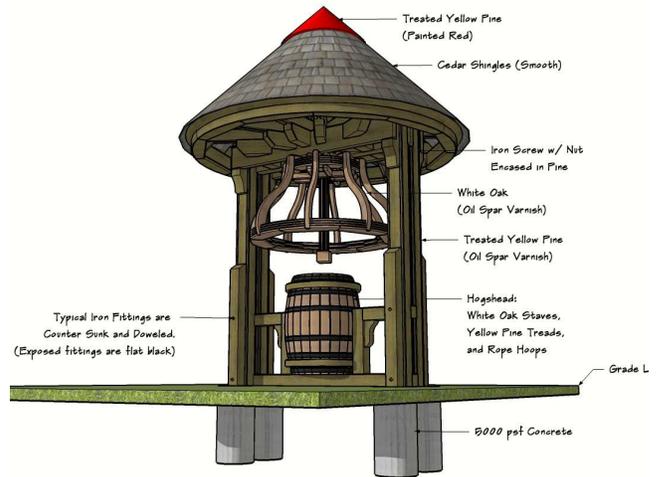


Figure 4: Materials Used in Construction of the Press

Placement of the Exhibit

In coordination with the Colonial National Historical Park, the tobacco press exhibit will be installed at the Archer Cottage on the Yorktown Waterfront. This is a particularly appropriate site for several reasons.

First, the site is at the entrance to the “Great Valley”. This was one of the paths along which tobacco hogsheads were rolled from the Customhouse to the Yorktown Waterfront for transport. The Great Valley was also the trail that newly arrived slaves would walk as they disembarked from ships and were taken to the courthouse for auction. Most of these men, women and children would come to work in the Virginia tobacco trade. A road side marker at the top of the hill discusses the Great Valley’s role in colonial commerce, and a newly erected marker at the bottom of the hill describes the location as a point of entry for African slaves - and their indispensable role in early American economy.

Secondly, the Colonial National Historical Park, in cooperation with the Watermen’s Museum, is increasing the level of historical interpretation that will be conducted at the Archer Cottage. The new exhibit dovetails with this plan and provides a hands-on opportunity for visitors to examine one of the key tools of early industry.

Project Participants

The project is being conducted as a cooperative effort between several groups:

The Twisted Oaks Foundation

Walt Akers, Director

The foundation is responsible for the research, design, construction and placement of the exhibit and has funded the costs of production. Once completed, the exhibit will be donated to the Colonial National Historical Park as a permanent exhibit.

The Colonial National Historical Park

Dan Smith, Superintendent

The Colonial National Historical Park will be responsible for developing an interpretive program and producing wayside signs that describe the use

of the tobacco press and the significance of tobacco in the economic culture of Colonial Virginia.

The Watermen’s Museum

Dave Niebuhr, Executive Director

Under a cooperative agreement with the Colonial National Historical Park, Watermen’s Museum volunteers and staff will conduct interpretive programs at the Archer Cottage. These programs will include discussion and demonstration of the tobacco press.

Project Status

Started in late 2012, the tobacco press is now complete and ready for installation. Upon final approval from the State Historic Preservation Office, the exhibit will be installed in October 2013 and should be accessible to the public in time for the Yorktown Day celebration on October 19th.

Contact Information

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References

1. Arnold, B.W. (1897). History of the tobacco industry in Virginia from 1860 to 1894. John Hopkins University Studies in Historical and Political Science. The John Hopkins Press. Baltimore. Retrieved on August 18, 2013 from <http://books.google.com/books?id=j18aAAAAYAAJ>.
2. Billings, E (1875) Tobacco Press [Drawing]. Tobacco: Its history, varieties, culture. manufacture and commerce. American Publishing Company. Hartford, CT.
3. Bridenbaugh, C. (1968) Vexed and troubled Englishmen 1590-1642. Oxford University Press. New York.
4. Chandler, J. and Thames, T. (1907) Colonial Virginia. Times Dispatch Company. Richmond, VA. Retrieved August 19, 2013 from <http://books.google.com/books?id=8RwSAAAAYAAJ>.
5. Cotton, L. (1998) Tobacco: Colonial Cultivation Methods. Colonial National Historical Park. Retrieved August 19, 2013 from <http://www.nps.gov/jame/historyculture/tobacco-colonial-cultivation-methods.htm>.
6. Fry, J. and Jefferson, P. (1751) A map of the most inhabited part of Virginia containing the whole province of Maryland with part of Pensilvania, New Jersey and North Carolina. Drawn by Joshua Fry & Peter Jefferson in 1751 (Map). Library of Congress. Retrieved August 20, 2013 from <http://memory.loc.gov>.
7. Grymes, C. (2013) Colonial shipping and town development in Tidewater. From Feet to Space: Transportation in Virginia. Retrieved August 20, 2013 from <http://www.virginiaplaces.org/transportation/colonialshipping.html>.
8. Hinton, J.H. (1830) The history and topography of the United States. London.
9. Killebrew, J,B. (1884). Report on the culture and curing of tobacco in the United States. Government Printing Office. Washington. Retrieved August 18, 2013 from <http://ia600301.us.archive.org/5/items/reportonculturecookillrich/reportonculturecookillrich.pdf>.
10. King, E. and Champney, J. (1875). The great south; A record of journeys in Louisiana, Texas, the Indian Territory, Missouri, Arkansas, Mississippi, Alabama, Georgia, Florida, South Carolina, North Carolina, Kentucky, Tennessee, Virginia, West Virginia, and Maryland. American Publishing Co. Hartford, CT. Retrieved August 18, 2013 from <http://docsouth.unc.edu/nc/king/ill407.html>.
11. Kulikoff, A. (1986) Tobacco and slaves: the development of southern cultures in the Cheaspeake 1680-1800. The University of North Carolina Press. Retrieved August 19, 2013 from http://books.google.com/books?id=NCvU9_bj-1QC.
12. Neill, E.D. (1869) History of the Virginia company of London. Joel Munsell Publishing. Albany, NY. Retrieved August 18, 2013 from <http://books.google.com/books?id=X3kFAAAAQAAJ>.
13. Northrup, C. (2003) The American economy: a historical encyclopedia. ABC-CLIO. Santa Barbara, CA. Retrieved August 19, 2013 from <http://books.google.com/books?id=3DE4P7NdaycC>.
14. Rakeman, Carl, (1952) 1760 – The Tobacco Rolling Road (Painting). United States Transportation History. Highways of History Project. Retrieved August 19, 2013 from <http://ufdc.ufl.edu/UFO0020053/00001>.
15. Sainsbury, W. (1900) Virginia in 1632-33-34. The Virginia Magazine of History and Biography, Vol 8, No 2. Virginia Historical Society. Richmond. Retrieved August 19, 2013 from <http://www.jstor.org/stable/4242330>.
16. Salmon, E. J., & Salmon, J. (2013) Tobacco in Colonial Virginia. *Encyclopedia Virginia*. Virginia Foundation for the Humanities. Retrieved August 19, 2013 from http://www.EncyclopediaVirginia.org/Tobacco_in_Colonial_Virginia.
17. Tapco Inc. (2011) Bulk material density table. Elevator Buckets – Elevator Bolts Product Guide, 6th Ed. Retrieved August 20, 2013 from <http://www.tapcoinc.com/media/Tapco2011.pdf>
18. Tarter, B., and the *Dictionary of Virginia Biography*. (2013) Edward Digges (1621–1675). *Encyclopedia Virginia*. Retrieved August 19, 2013 from http://www.EncyclopediaVirginia.org/Digges_Edward_1621-1675.
19. Terrell, B. (2011) The James River batteau: tobacco transport in Virginia. Virginia Canals and Navigation Society. Retrieved August 20, 2013 from http://vacanals.org/batteau/batteau_construction/tobacco_transport%20Bruce%20Terrell.html.
20. U.S. Navy. (1998) Origin of navy terminology. The Navy Department Library. Retrieved August 20, 2013 from

<http://www.history.navy.mil/library/online/origin.htm>.

21. Virginia Assembly (1708) An act for improving the staple of tobacco, and for regulating the size and tare of tobacco hogsheads. Acts of Assembly Passed in Colonial Virginia, From 1662 to 1715. Retrieved August 20, 2013 from <http://books.google.com/books?id=Y4E2AQAAMA> AJ.
22. Virginia Assembly. (1730) An act for amending the staple of tobacco; and for preventing fraud in his majesty's customs. The Statutes at Large; Being a Collection of All the Laws of Virginia from the First

Session of the Legislature in the Year 1619. New York. Retrieved August 19, 2013 from http://www.encyclopediavirginia.org/_An_Act_for_amending_the_Staple_of_Tobacco_and_for_preventing_Frauds_in_his_Majesty_s_Customs_1730.