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Virtually Scanning Jamestown 1607-1610

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Virtual Curation Laboratory and Virginia Commonwealth University Alumni



Abstract

The Virtual Curation Laboratory, located at Virginia Commonwealth University, has been 3D scanning artifacts in collaboration with Jamestown Rediscovery from a very narrow period of time, 1607 to 1610. This short time period includes the founding of the Jamestown colony and the Starving Time, where colonists consumed dogs, their seven horses, and at least one young woman. The intersection of Native Americans and Europeans can also be seen with native-made artifacts found in European contexts or altered by European contact. This poster will feature a butchered dog mandible and a butchered horse tibia from the Starving Time, native-made and European-made pipes and ceramics, a projectile point, and a jeweler's mold.

Introduction

Jamestown was established in 1607 as the first permanent English colony in the New World. The colonists first built a triangular palisade fort to protect themselves and their homes from their surrounding environment and potential attacks. The following year the colony faced several obstacles including lack of supplies, attacks from nearby Indians, and a fire that severely damaged the English colony. The Jamestown settlement recovered and grew thanks to fresh supplies from Indians, supply shipments, and more settlers from England (Kelso and Lucchetti, 1998). In 1609-1610 also known as the Starving Time, over 90% of the total population perished from starvation and different nutritional deficiency diseases that resulted from malnutrition. Following the Starving Time, Jamestown was abandoned for a short period of time until Lord De La Ware arrived with colonists and supply ships to re-establish Jamestown, which would become the capital of Virginia in the future (Kupperman 1979; Virginia Historical Society, 1907).

The Virtual Curation Laboratory, located at Virginia Commonwealth University, is actively working with Jamestown Rediscovery and digitally scan and 3D print several artifacts that have been archaeologically found at the Jamestown settlement. The scanner used is a NextEngine 3D Laser Scanner that digitally records objects using eye safe lasers. Inside the lab there is a Makerbot Replicator 2, a 3D printer that uses PLA filament plastic to print different artifacts that have been scanned (Means et al. 2013).



Contact Period



This bust is of a young Englishman that died from an arrow wound that occurred during an Indian attack in 1607, just two weeks after the colonists landed at Jamestown. The young man was between 14 to 15 years old and suffered from an infection that spread from an abscessed tooth into his lower jaw bone. Due to his existing infection from his tooth he did not survive his injuries from the Indian attack.



This arrow point was found still stuck in Arrow Point Boy's leg when his remains were recovered. This arrow point was shot into the young man's leg from an Indian attack in 1607 and due to an existing infection he died from his wounds.



This native-made pipe dates from 1608-1610 and was recovered from the "John Smith well" feature.

A Commercial Venture



This brass jeweler's mold with an imprinted pelican standing on a pedestal was recovered from an early 17th century well at Jamestown. The mold was likely to have belonged to the only jeweler at Jamestown.



This upper portion of a Bartmann jug was found along with many other fragments belonging to other Bartmann vessels. Bartmann (also known as Brown Frechen or Bellarmine) jugs are saltglazed stoneware made in Germany from 1550-1770 and are most well-known for the bearded figure on the neck of the jugs.



This pipe was made by Robert Cotton, a tobacco pipe maker, that was among the first group of craftsmen to arrive at Jamestown. The pipe has a distinctive stamped design of four fleur-de-lis forming a cross within a diamond and dates to 1608.



This pottery fragment was also presumably created by Robert Cotton since it was made out of the same material he used to create tobacco pipes. The fragment was made from white clay and was impressed against the interior of an American Indian basket, which made the impression.



This vessel was made by pressing clay against the interior of a woven basket made by Native Indians and once it was dry it left the basket impression on the vessel. The vessel was recovered from an "John Smith well" feature that dates from 1608-1610. This vessel was also presumably created by Robert Cotton, since it was made from the same material.



This bone is the left coracoid from a petrel bird and was recovered from a soldier's pit that dates from 1607-1610. The humerus is the bone that connects the arm to torso. The petrel bird is native to Bermuda and most likely found its way to Jamestown from a supply ship that was shipwrecked in Bermuda by a hurricane, but arrived in Jamestown in May 1610.



This bone is the left coracoid belonging to a petrel bird and was recovered from the same soldier's pit. The coracoid is located on the back and is the projecting part of the shoulder blade. Petrels are native to Bermuda and found its way to Jamestown from a supply ship that was shipwrecked in Bermuda by a hurricane, but arrived in Jamestown in May 1610.



This scute (also known as a bony plate) is found on the backs of sturgeons that were fished and eaten by Jamestown settlers and Native Americans.

The Starving Time



This mandible belonged to a dog at Jamestown that dates back to the Starving Time. There are evident cut marks evident on the mandible that show this dog was consumed by settlers. The Jamestown colonists faced desperation when they ran out of food and turned towards a wide variety of animals they had in their settlement that normally are not consumed.



This tibia belonged to one of the seven horses the colonist brought with them to Jamestown and dates from 1609-1610. The tibia was found in a kitchen cellar and has cut marks indicating it was most likely consumed by settlers during the Starving Time.

Conclusion

The Jamestown settlement is full of history from the first colonists establishing the palisade fort to the Starving Time and beyond. The Virtual Curation Laboratory, here at VCU, is able to bring that history to life and allow the public to view and touch artifacts that would either be in an enclosed display case or behind secure storage. This poster features several artifacts scanned and printed, including: a butchered dog mandible and a butchered horse tibia from the Starving Time, native-made and European-made pipes and ceramics, a projectile point, and a jeweler's mold. The collaboration between Jamestown Rediscovery and the Virtual Curation Laboratory helps show the public view the variety of items and animals that would have been made by the people who lived at Jamestown from 1607-1610. 3D scanning and printing of digital models of artifacts are an excellent way to preserve, replicate, and display artifacts that would either be too fragile to handle or are deteriorating. Plastic replicas help preserve Jamestown's history and allow the public to make a tangible connection to the past in a way not feasible with the original objects from this important historic site.

I would like to thank Jamestown Rediscovery and the Virtual Curation Laboratory. Citations are available upon request.

For more information visit: historicjamestowne.org, vcuarchaeology3d.wordpress.com, and virtualcurationmuseum.wordpress.com/tag/virtual-curation-laboratory/