

## Activity: Can You Date the Site?

### Summary

The year the skeleton was buried in the cellar at the site can be estimated by examining the deeds and proof of land ownership, artifacts found, and building elements at the site. This is referred to as dating the site. Certain artifacts provide dates based on date of manufacture or when they were in popular use. Just as styles in clothing or cars change over time, so did 17th century ceramics, glass, tobacco pipes, and other key artifacts. These datable artifacts are valuable tools for archeological research. In several instances, the team working at the site actually recovered artifacts with dates imprinted on them.

An initial walking survey at the site produced evidence that it was a late 17th century site. The walk through a plowed field established the presence of artifacts on the surface, including wrought iron nails, brown and blue-gray stoneware, and white-clay tobacco pipe fragments - all manufactured in the 17th century.

The archeological analysis included examining building elements and artifacts, and searching records of deeds, property, and land ownership. The findings are described below.

### Building Elements: Date the Site Using Window Lead

Building elements are excellent sources for dating a site. The manner in which posts and beams were joined, the existence of bubbles in window glass, the type of wood, stone, and brick used to construct a building all changed through time and provide information for dating.

At the Lost Towns site, all that remained was the cellar of the house. Post holes were uncovered that indicated only the type of house originally constructed on the site, not a date. Very little window glass was recovered from the site but three pieces of window lead were found. (Window lead was used to hold glass panes in place.) The three pieces of window lead were all stamped with a 'maker's mark' (Figure 1). One is stamped with the date 1663 (presumably the date of manufacture) and the name "MASHAM," and the others are stamped with "SAMUEL."



Figure 1. Window lead stamped MASHAM 1663. (Source: The Lost Towns Project)

Based on the window lead found at the site, the earliest date for the site would be 1663.

### **Artifacts: Date the Site Using a Coin**

When money is found at a site, it can often lead to a misinterpretation of the actual site date. Coins, although dated with the year they were minted, are often in circulation for years afterwards. At the Lost Towns site, a coin minted in 1664 from the Isle of Wight was found. (Figure 2)



**Figure 2: Isle of Wight Coin 1664 Depiction of a ship (left) New Port Isle of Wight 1664 (right)**

Considering the position of the coin relative to the body and the date on the coin, the earliest date of the burial is 1664.

### **Artifacts: Use Pipes to Date the Site**

Also found at the site were tobacco pipe fragments. It may seem like an odd choice of artifact for dating a site, but information about how a pipe was made, when, and by whom tells a story, which helps narrow the time frame. At the Lost Towns site, 501 pipe fragments were collected from the trash deposit around the body during excavation. This equates to roughly 123 pipes. Only 5 of the fragments were made of terra cotta (locally made); the rest were made of white kaolin clay (imported).

Two independent methods of date calculation were used on the pipe fragments - marks of manufacturers and trends in pipe styles.

Most of the pipes in the collection were imported from English or Dutch manufacturers. The makers' marks and decorative motifs of the pipes in the collection were analyzed. Known makers' marks include those of Llewelin Evans (1661 - 1689), William Evans (1660 - 1690), Phillip Edwards (1649 - 1696), Edward Bird (1630 - 1665), and Richard Nunney (1655 - 1713).

In addition to makers' marks, certain stylistic changes are known to have occurred in pipes through time. Looking at the proportion of different pipe styles at the site gives another way to pin down the period when the site was inhabited. In the Lost Towns collection of pipes amassed from several colonial Chesapeake sites, a pattern of pipe trends is recorded in which belly bowls were in a decline, and trade pipes were increasing.

#### **Belly Pipes**

Belly bowl pipes have a bulbous bowl and a heel on the bottom (in Figure 3, note the flat heel surface; imagine setting the pipe down on a table; the heel helps it to remain upright). These pipes came to the Colonies from Europe in the 17th century; the majority from Britain and later Holland. This style of pipe began to disappear by the 18th century.



**Figure 3: Belly Bowl Pipes (Source: The Lost Towns Project)**

#### **Trade Pipes**

The trade pipe (Figure 4), used in the 17th through 19th centuries, was made by many different Europeans, and later, by North Americans. The pipe became more popular as importing pipes from England increased. The change in design from the belly bowl pipe with a heel, to a heel-less trade pipe apparently was related to shipping considerations. Apparently, trade pipes packed more efficiently, and breakage was

minimized. Pipe "trade" was from England to the Colonies. Trade pipes manufactured in England rarely appear in England, since they were sent almost exclusively to the Colonies. They were also known as elbow pipes and began appearing as early as 1655. By the 1670s, they were common in the Americas. Trade pipes were still used in the 18th century after the belly bowl pipes began to fade out.



**Figure 4: Trade Pipe**  
(Source: The Lost Towns Project)

The archeologists at the site identified 31 belly bowl pipes and 69 trade pipes. The two groups of pipes make up 100 percent of the known pipes.

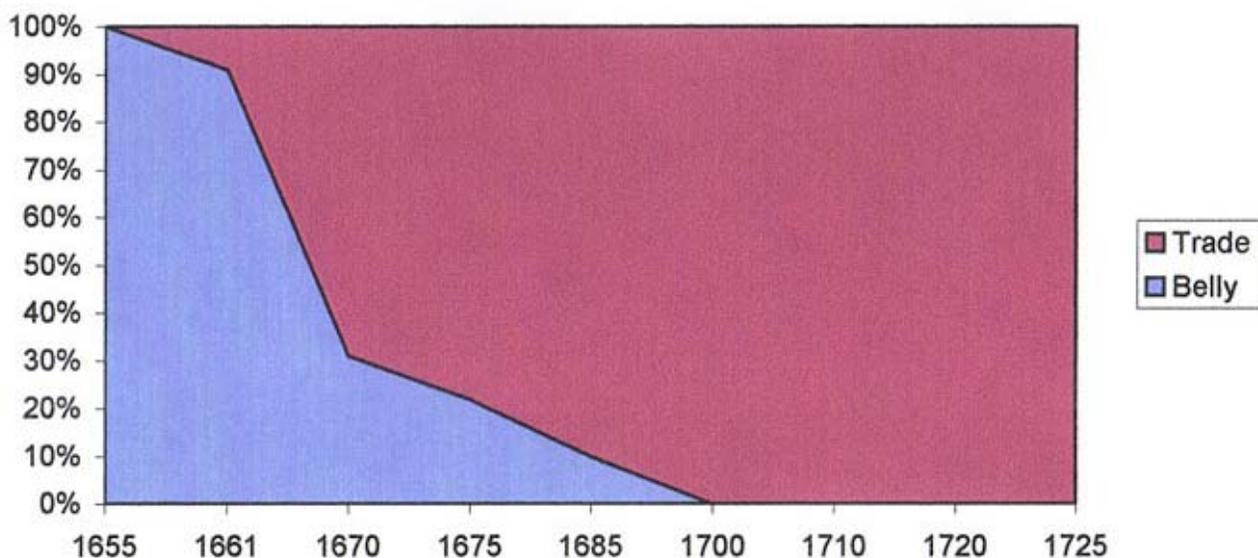
Calculate the percentages for the two styles of pipes.

$$31 \text{ bellies} + 69 \text{ trades} = 100 \text{ total}$$

To calculate percentage:  $(\text{number pipes} / \text{total number pipes}) \times 100 = \text{percent}$

For example, to calculate percentage of bellies:  $(31/100) \times 100 = 31 \text{ percent}$

Use the graph below to plot the relative proportions of the two pipe styles and extrapolate a date. Locate the position on the black line separating belly (blue) from trade (red) pipes that best represents the two percentages in Figure 5. From this point, draw a straight line down to the x-axis.



**Figure 5. Relative proportion of belly bowl pipes to trade pipes from 1655 - 1725 (Source: The Lost Towns Project )**

### Records Research: Who Owned the Land at the Time of Burial?

The passage of land ownership helps in dating the site, eliminating later dates as possibilities and narrowing down the time range in which artifacts on the site were found. The following flowchart (Figure 6) provides a time frame of property ownership, and descriptions in the chart provide information on some of the owners

of the site.

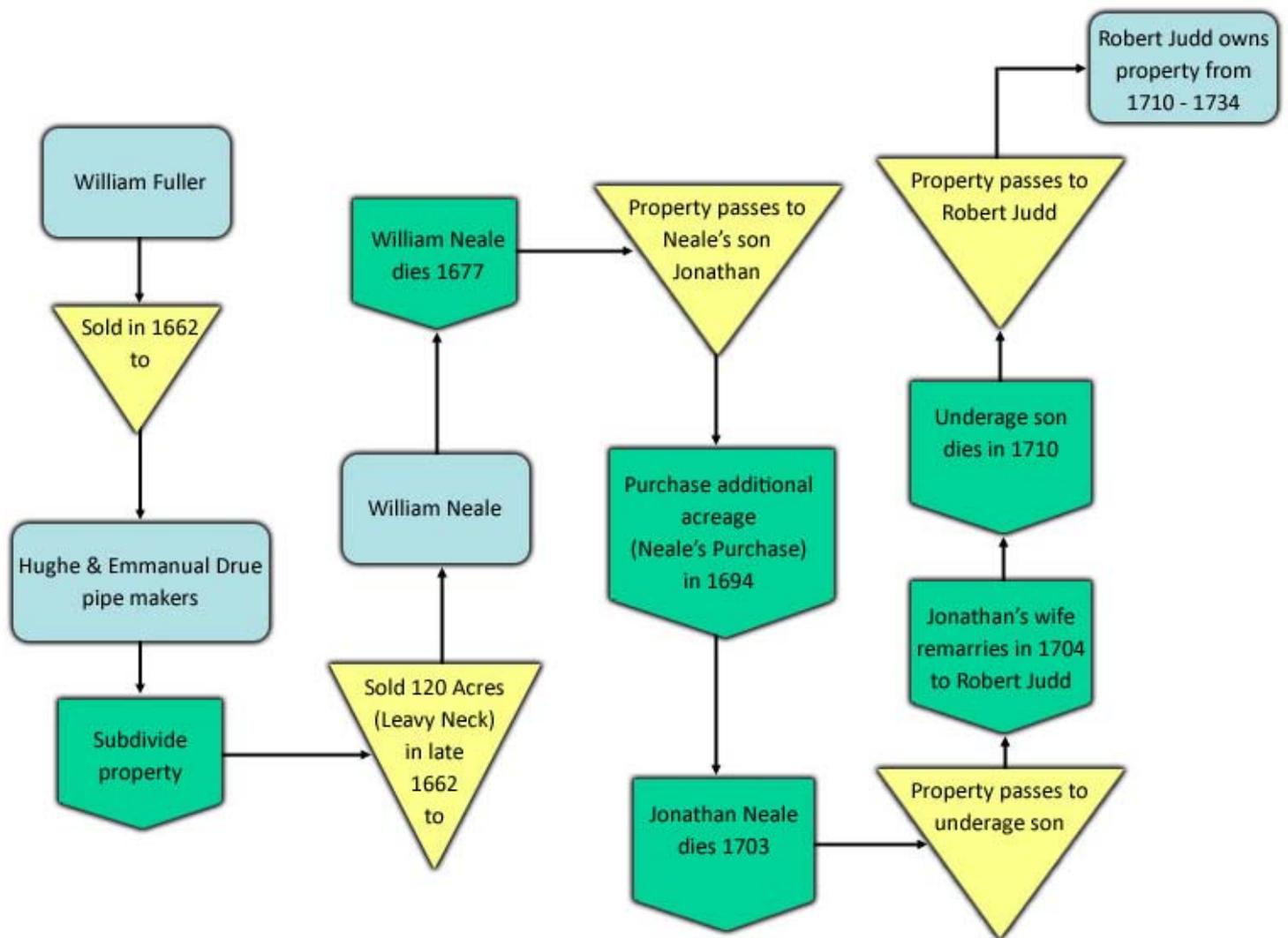


Figure 6: Property Ownership Flowchart (Source: Smithsonian Institution)

**William Fuller:** Fuller held the original patent on the parcel of land, which was within the settlement of Providence, established in 1649. He served as a Maryland Parliamentary Commissioner during the period of Parliamentary rule in England and led the Puritan Army in the Battle of the Severn in 1655, the only action of the English Civil War that occurred on American soil. He had the land surveyed in 1659 and sold it to Hugh Drue (date unknown).

**Hugh Drue:** Drue sub-divided the property in 1662 and sold a part to his brother, Emmanuel, who began a tobacco pipe kiln on the property. Hugh sold the other parcel to William Neale.

**William Neale:** Neale arrived in Providence in 1662 with his wife, three children, and two unnamed indentured servants and established a small plantation. William died in 1677, and the land passed to his son, Jonathan. At the time of William's death, records show that two indentured servants lived with the family. Jonathan died in 1703, and the property passed to Robert Jubb in 1710 when he married Jonathan's widow, Hellinor.

**Robert Jubb:** The Jubb family owned the property until 1734, when Robert Gordon bought it.

**Source:**

Luckenbach, Al and Shawn Sharpe. 2008. A Seriation Analysis of "Trade" and "Belly Bowl" Tobacco Pipe Forms from ca. 1655 to ca. 1725. *Maryland Archeology*, in press.

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This page is part of the [Smithsonian's The Secret in the Cellar Webcomic](#), an educational resource from the *Written in Bone* exhibition, February 2009 - 2014.