“Culture of the Earth”

The Archaeology of the Ornamental Plant Nursery and an Antebellum Slave Cabin at Thomas Jefferson’s Poplar Forest
A Legacy of Research
When Thomas Jefferson was a boy, he was fascinated by the Native Americans he saw pass by his childhood home of Shadwell, and the large earthen mound he saw them visiting. How was this mound built, and for what purpose? His childhood curiosity led him as an adult to conduct one of the first studies of another culture through careful scientific excavation and analysis. By examining the layers of soil and materials he found within the mound, Jefferson was able to show that ancestors of the local Monacan Indians had created these ceremonial places many years before. This disproved the popular myth that these mounds were created by a long-vanished civilization. He then published his results in his only book, _Notes on the State of Virginia_, allowing others to learn of Virginia’s rich record of human heritage through his excavations.

While today’s techniques are much more refined than they were 200 years ago, the goals of archaeology remain the same. Modern archaeologists at Poplar Forest study people who lived in the past by carefully excavating, recording, and examining the things they left behind. These things can be as large as a house, as small as a bead, or as microscopic as a grain of pollen from the wheat used to make a loaf of bread. At Poplar Forest, we also study how people changed the landscape over the years from forests to agricultural fields to slave quarters to gardens to ornamental grounds.

Like Jefferson, we want to tell others what we have discovered. This booklet shares what we have learned about two exciting archaeological sites at Poplar Forest. It also discusses how we do archaeology and the different approaches we use to understand the past.

The first site has been identified as Jefferson’s ornamental plant nursery, where many of the shrubs and trees were raised to create the grounds of his retreat. Studying this site gives us new information about the daily struggles experienced by Jefferson and his enslaved workers as they attempted to create beautiful gardens in a rural corner of Virginia with less than fertile soil.

The second site was created after Jefferson’s death, when the plantation was owned by the Cobbs and Hutter families. This site is the location of a cabin inhabited by enslaved African Americans from the 1840s to emancipation. The artifacts, and plant and animal remains from this cabin give us amazing new insights into the personal lives of these enslaved residents of Poplar Forest.
Settling and Planting the Piedmont Frontier

In the mid-1700s tobacco planters in eastern Virginia began to look to the west for new lands on which to grow their lucrative cash crop. The rolling hills of the piedmont became the next frontier and soon small groups of enslaved workers began clearing forests for new tobacco plantations. A particularly well-watered tract of land called Poplar Forest, located in present day Bedford County, was first settled in the 1760s by a small number of slaves owned by John Wayles, a lawyer living in Charles City County. Under the direction of a white overseer, these slaves cut down trees to create fields and began planting hills of tobacco around the stumps.

When John Wayles died in 1773, his land and slaves passed to his son-in-law, Thomas Jefferson. The Poplar Forest plantation encompassed 5,000 acres at this time and was divided into separate farms, each with an overseer and a small workforce of slaves. Ten years after Thomas Jefferson took over the plantation there were thirty-five enslaved men, women, and children living on the property, most of whom worked in the fields raising tobacco. Small log barns for drying the crop dotted the ridge-tops, and forested areas continued to be cleared for new fields as the tobacco quickly drained the fertility from the soil.

The devastating effects of tobacco on soil fertility was a primary reason Thomas Jefferson introduced wheat and a system of crop rotation to his plantations after 1790. While still growing tobacco at Poplar Forest, Jefferson instructed his overseers and slaves to raise wheat as another cash crop. Fields of peas, corn, and fodder crops were also planted in order to feed the slaves and livestock while other fields remained fallow in attempts to restore productivity to the soil.

As more ground was laid bare for new crops, erosion began to cut gullies across the landscape. Among these gullies, archaeologists discovered the remains of a house where slaves lived between the 1770s and 1790s. Another set of cabins was also discovered nearby, dating from 1790 to 1812. These two groupings of buildings are also called “quarters” and the archaeologists refer to the early cabin as the North Hill Quarter Site and the later set of cabins simply as the Quarter Site. The cabins would have stood close to an overseer’s house and the fields in which the slaves worked. Alongside the remains of wooden posts, chunks of clay daub were found at these sites. Daub was used to line the chimneys and fill the cracks of these log structures to keep out the cold and vermin.

With precious little space or privacy, the slaves living at these two quarters cut pits directly into the dirt floors of their houses to use as storage spaces for food and personal belongings. When the cabins were torn down, these pits were filled in with the trash and debris that had collected around these structures.

The careful excavation of these pits, referred to as subfloor pits by archaeologists, and the examination of artifacts within them can give archaeologists a lot of information about the daily lives and work activities of the slaves that lived on the plantation in the late 1700s and early 1800s. Iron tools for making barrels and a hinge for a carpenter’s ruler found at the Quarter Site (ca.1790–1812) suggest one or more skilled laborers lived in one of these cabins. Beads, lace tips, and copper buttons, some with engraved designs from both the Quarter Site and nearby North Hill (c.a. 1770s–1780s), show slaves acquired small items to help embellish their clothing and appearance. Other artifacts, such as musical instruments and marbles, also tell how enslaved workers spent their small amounts of leisure time. Slate pencils and writing slates suggest that some of these quarters’ residents may have learned to read and write. Numerous stone tobacco pipes, including one that broke while it was being made, were also found. Most likely one of the slaves living at Poplar Forest was hand crafting these tobacco pipes from a soft stone known as micaceous schist, which is found in this part of Virginia.

Jefferson rarely traveled to Poplar Forest at this time. He was engaged in a life of public service that allowed him little time to visit his home at Monticello, much less his plantation in Bedford. He ran the agricultural operations at Poplar Forest through letters to his overseers, whom he trusted to bring crops of tobacco and wheat to market on time to make a profit. Jefferson had other plans for Poplar Forest though—plans that he started to implement after he became the third president of the United States in 1800.

With the development of the nation and the rise of parties, Jefferson rarely traveled to Poplar Forest at this time. He was engaged in a life of public service that allowed him little time to visit his home at Monticello, much less his plantation in Bedford. He ran the agricultural operations at Poplar Forest through letters to his overseers, whom he trusted to bring crops of tobacco and wheat to market on time to make a profit. Jefferson had other plans for Poplar Forest though—plans that he started to implement after he became the third president of the United States in 1800.

Top: Chunk of daub with finger impressions preserved in the clay
Above: An archaeologist works near one of the subfloor pits at the Quarter site.
Below: Stone tobacco pipes found at Poplar Forest
When Thomas Jefferson entered his second term as president, he desired a quiet place to retire where he could do the things that made him happiest—read, study, and think. In 1806, from the President’s House in Washington D.C., he began directing both free and enslaved workmen to build such a retreat at the heart of his Poplar Forest plantation. Situated on a hill between two branches of the Tomahawk Creek, Jefferson’s retreat home was radically different from the typical farm houses of Virginia. Made of brick, the house was a two-story octagon, sunk into the hill. As slaves dug the foundation and 200-foot sunken lawn, they piled the earth into two mounds, which flanked the house to the east and west. These mounds mimicked the end pavilions common to Palladian architecture, a style loved by Jefferson. By 1809 the exterior of the house was finished just in time for his retirement from the presidency. Soon he began making regular trips to his Poplar Forest retreat, accompanied by his enslaved servant Burwell Colbert.

Changes to the landscape and buildings of Jefferson’s retreat were ongoing for much of his remaining years. By 1811, Jefferson had begun to establish plantings of willow and aspen trees on the mounds. A large vegetable garden was in the works, as were the beginnings of an ornamental plant nursery to supply the trees needed for the many other projects Jefferson had planned. As a matter of practicality, this nursery was placed near a stable in order to take advantage of the manure. Over the next several years, this nursery would raise more than a hundred trees that were destined for the grounds around the house, primarily willows, aspens, Athenian and Lombardy poplars, and paper mulberries.

The years 1812 through 1815 brought significant change to the ornamental landscape and retreat home, as Jefferson increased his efforts to create the private place he truly desired. In 1812 ornamental plantings of trees were established at the corners of the house and flowering shrubs were planted down the banks of the sunken lawn. Double rows of paper mulberry trees were also planted between the house and mounds, mimicking the wings of a building. Surrounding all of this was a circular road lined with 160 paper mulberry trees. Archaeological excavations have found the remains of many of these planting features.

In 1813, a wing of rooms was built to the east of the main house. The “wing of offices” as Jefferson called them, contained a storeroom, kitchen, a combined cook’s quarter and laundry, and a smokehouse. Torn down in the 1840s, archaeologists uncovered the remains of the original floors and foundations during excavations in the late 1980s.

By 1816, Jefferson began bringing his granddaughters on his trips to Poplar Forest, and continued refining his ornamental landscape. The plantation still functioned under the management of overseers, and the enslaved community was relatively stable, with seven extended families forming the nucleus of the work force. The houses for at least two of these families, headed by Hannah and Maria, were built near the vegetable garden and nursery. Poplar Forest’s archaeologists are still working to find the remains of these and other quarters, which may have been located nearby.

In 1823, with his advancing age, Jefferson turned over his retreat and a portion of Poplar Forest’s land and slaves to his grandson Francis Eppes. Despite Jefferson’s efforts to rotate crops and revitalize the fields, by his death in 1826, the soil of Poplar Forest was exhausted.

In 1828, Francis Eppes sold the house and remaining portion of the plantation to William Cobbs, before moving to Florida. Slaves who had lived at Poplar Forest for many years were soon dispersed to other properties, and the Cobbs family brought in a new work force. Many changes lay ahead for Poplar Forest.

“I see no ties which should bind any descendants of our grandfather to this state. The people are cold to his memory, the soil is exhausted, the staple [tobacco] reduced almost to the prime cost of the materials…”

—Francis Eppes to Nicholas Trist, March 2, 1828
The Antebellum Plantation

William Cobbs’ purchase of Poplar Forest in 1828 marks the beginning of one-hundred eighteen years of residency by the Cobbs and Hutter families. This residency began in the antebellum period. Antebellum means before the war, in this case the American Civil War. The antebellum period of American history began with the Missouri Compromise in 1820 and ended with the start of the war in 1861.

William Cobbs was married to Marian Stanard Scott. The couple’s only child, Emma, married Edward Hutter in 1840. Hutter was a naval officer from Pennsylvania. He met Emma through his brother, George, who owned Sandusky plantation, which was located six miles from Poplar Forest. By 1842, management of Poplar Forest was assumed by Edward Hutter after his father-in-law suffered a head injury, rendering him unable to manage the plantation independently.

Poplar Forest’s enslaved community underwent a dramatic transformation with the sale of the property in 1828. When Francis Eppes moved to Florida, most members of the enslaved community were dispersed throughout Virginia and beyond. William and Marian Cobbs brought slaves of their own to work the land and serve their domestic needs. Slave census data, family letters, deeds, and a farm journal provide insight into aspects of the slave community, such as age, gender, and, in some cases, the kinship relations among the enslaved.

Edward Hutter kept a farm journal from 1844 to 1854. Although the daily entries are concise, they aptly describe the work routines of field laborers. Hutter documented that enslaved field workers were engaged in planting, tending, fertilizing, and harvesting crops on a regular basis. Their work included numerous tasks, such as planting and tilling fields, digging ditches, and taking crops to market. Workers were also frequently engaged in building and repairing their own houses and constructing plantation outbuildings. Although Hutter’s farm journal describes the daily routines of field labor, it fails to document how house servants spent their time, or how the enslaved shaped their own lives. Archaeology has begun to provide these details.

During Union General Hunter’s Lynchburg campaign in 1864, Federal troops came to Bedford for the first time. In 1909, the Hutter’s youngest son, Christian, recalled that General Hunter “carried off everything with life except of about 10 faithful negroes out of 48 slaves.” Hunter’s campaign, coupled with the devaluation of Confederate money after the Civil War, had a severe impact on the plantation economy of Poplar Forest. After emancipation, Hutter made sharecropping arrangements with tenant farmers and hired additional laborers and an overseer to work the former plantation lands. Edward Hutter died in 1875. The death of his mother-in-law in 1877, marked the end of the Cobbs and Hutter families’ full-time residence at Poplar Forest and a return to part-time residence.
Excavation Methods

At Poplar Forest, many archaeological sites have been buried and are no longer visible on the surface. This was the case with the two sites described here—Jefferson’s ornamental plant nursery and the antebellum slave cabin. Archaeologists located these sites by first digging shovel test pits. These small excavation units, usually 2 x 2– or 4 x 4–foot squares, were spaced every 25 feet on a grid across the area the archaeologists wanted to investigate. The test pits were dug with shovels and all of the soil was pushed through a mesh screen in order to recover any artifacts. Some test pits had nothing in them at all, while others contained numerous artifacts or revealed piles of stone and building rubble. By creating a map of the test pits that contained features or had a lot of artifacts, the archaeologists got a better idea of where human activities happened in the past. But test pits are only small windows into an archaeological site. In order to fully understand what happened here, larger excavation units were opened.

In order to investigate these sites more thoroughly, the archaeologists excavated a series of larger 5 x 5–foot squares, each given its own unique number. Every layer of soil within each unit was excavated separately using shovels or trowels. Since each layer represents a different activity or time period from the past, it is important to keep them separate. All artifacts from these layers were put into bags labeled with the number of the excavation unit and layer. This information is called the “context” and by looking at the artifacts found in each context the archaeologists can figure out how and when the layer was created.

Archaeologists look for features when they excavate. Features are components, such as foundations, drains, postholes, or filled-in pits, that can’t be removed from the site without being destroyed. By studying features along with artifacts, the archaeologists can get a better idea about the activities that took place in the past. A filled-in pit, similar to those found at Poplar Forest’s earlier slave quarters, a pile of chimney stones, and an assortment of buttons, glass bottles, and ceramic vessels from the mid-1800s were some of the things indicating to archaeologists that they had found the remains of an antebellum slave cabin. The site of the nursery contained drains and small, round stains in the soil that indicated where the roots of plants once grew.

Archaeologists record everything they find with careful notes, hand-drawn maps, laser-guided survey equipment, and photographs. Pulling all of this information together can help determine how big a building was by looking at the number and spacing of postholes for a log cabin, or show that numerous large stones curving down a slope were once part of a drain.

Finding artifacts and features aren’t the only things archaeologists are interested in when they excavate. They also take soil samples from each layer in order to find very small remains. Not everything gets caught in the screens, so some samples are taken to be run through a flotation tank to recover small seeds, tiny artifacts, and fragile animal bones. Other samples are taken to send to specialists who can identify the microscopic remains of pollen, or chemicals trapped in the soil. Together, the information from samples, features, and artifacts give archaeologists a large amount of information to help them understand the sites they excavate. Most of the time, this understanding doesn’t happen in the field, but rather in the laboratory.
Laboratory Methods

Fieldwork is only the beginning of the archaeological process. Once artifacts have been excavated, they come into the lab to be washed, labeled, catalogued, and analyzed. This process typically takes two to three times as long as the excavation. As a result, much of the archaeological work that takes place at Poplar Forest takes place in the lab.

Once artifacts come into the lab, archaeologists check the artifact bags to be sure that the context information is recorded correctly. Knowing exactly where an artifact came from is what tells archaeologists when they were used and who may have been using them. Therefore, once this information has been checked, all but the most delicate artifacts are then carefully washed and labeled with their context information.

After this initial processing, the artifacts are catalogued in the Poplar Forest computer database. To catalogue artifacts, archaeologists must be able to identify each object. This requires training, research skills, and an understanding of the everyday materials that were used in the eighteenth, nineteenth, and twentieth centuries. Archaeologists can spend considerable time identifying ceramic patterns or determining what whole object is represented by a small fragment found during excavation. Archaeologists use a research library to identify objects and patterns, investigate manufacturing marks, and look for similar objects from other archaeological investigations. These data provide important clues for dating artifacts and understanding activities that once took place at the site, making the time well spent.

Artifact manufacturing dates can be used to create timelines for the different layers of soil found during excavation. Archaeologists must be familiar with the production dates of all sorts of artifacts made of ceramic, glass, and metal. Changes in artifact style can also provide dating clues. For example, the shapes of tobacco pipes and the decoration of plates changed over time.

Once information for each artifact goes into the database, archaeologists can create maps showing where certain types of artifacts were found across the site. This spatial information helps understand where buildings were, what kinds of activities were taking place, and in what time period the area was being used. For example, high concentrations of nails and window glass may indicate the location of a building, while high numbers of ceramic fragments elsewhere at the same site may indicate a location where trash from that building was being deposited.

Archaeologists also prepare artifacts for permanent storage or for use in the study collection. Artifacts are carefully packaged to minimize potential damage and placed in acid-free bags and containers. Some metals, particularly iron, are stored in plastic boxes with dessicant, a silica gel that absorbs moisture and helps keep metal from corroding. Objects with research potential and/or display possibilities are placed in the study collection where they can be easily accessed.

The soil samples collected in the field are processed in the laboratory too. Archaeologists use a technique called “flotation” to obtain macrobotanicals (a term used for plant remains), small artifacts, and delicate animal bones. Samples of soil collected through excavation are divided into 2.5-liter units and each sample is put into circulating water inside a flotation tank. This separates the soil from small artifacts such as beads and pins and from the tiny bones of animals and scales of fish. Plant parts which are often the remains of food, float to the top and are collected in fine mesh. These small remains are too small or delicate to be recovered during excavations, but they provide evidence about the past, such as diet and personal adornment, that the archaeologists might not know about otherwise.

Though lab work can be time-consuming and meticulous, the result is a detailed body of data that helps bring the personal history of Poplar Forest’s inhabitants to life, and show how their lives changed over time.
The Nursery

Archaeologists have found the remains of Jefferson’s ornamental plant nursery 400 feet southeast of the retreat house. The nursery was built on top of a heavily worn and gullied agricultural field. Significant labor was needed to revive the soil and provide an environment that could grow the shrubs and trees needed to create the grounds of Jefferson’s retreat. Archaeological evidence points toward different methods employed by Jefferson’s enslaved workers to create a space that could sustain the young plants. These efforts show up archaeologically in the form of trash-enriched soils, drainage beds, planting stains, and a stone-lined drain. Below are descriptions of the different features that were part of the nursery. According to Jefferson’s writings, the nursery was also located within a larger complex of stables, gardens, and slave quarters. Archaeologists are still looking for physical remains of the other elements of this complex.

The Gully

The gully was created as water channeled through a natural depression in the landscape, scouring away soil, which had been left bare from agricultural clearing and planting during the late 1700s. Over time, sediment began to accumulate in the gully, slowly filling it in. Enslaved laborers most likely finished filling it when Jefferson decided to use this area for the location of the nursery. A layer of charcoal-rich loam filled with Jefferson Period artifacts is thought to be the undisturbed remains of nursery soils from the top portion of the gully.

Planting Stains

Another type of feature found at the nursery were eleven small, circular planting stains filled with charcoal. These darker patches of soil may be the only physical remains of the ornamental plants, such as weeping and golden willows, Athenian poplars, Lombardy poplars, Monticello aspens, and calycanthus, that grew in Jefferson’s plant nursery. The large amounts of charcoal in the stains suggests it was used as fertilizer, a common horticultural practice at the time, and one that may have been taken to an extreme at Monticello where in 1808, one of Jefferson’s granddaughters complained that the charcoal added to the flower beds was extremely dirty to walk on.

Stone Drain

The location of this stone-lined drain at the top of the slope leading down to the plant nursery may have served to create a path for water, possibly run-off from nearby buildings, such as the stables mentioned in historical documents. The drain may also have been used to control the erosion that had created the gully, and to keep enriched soil and young plants from washing down slope. It is similar in style to the drains used to move water away from Jefferson’s nearby retreat home. The nursery drain held a channel of quartz cobbles that were laid in the base of a shallow trench and covered over with a hard-packed surface of brick-and-schist rubble. Excavations beneath this rubble revealed a layer of silty soil surrounding the cobble channel; perhaps sediment, which had accumulated when water once ran through the drain.

Brick Pads / Drainage Beds

Three unmortared brick pads were also found in the nursery. These pads consisted of several bricks laid side by side. Along with a surrounding layer of stone rubble these pads could have served as drainage beds, on top of which young trees could have been placed once they arrived at the nursery. As they awaited transplant into the ornamental grounds it was important to keep water from pooling around the root balls and rotting their young root systems. The brick pads and rubble would help filter water away from the plants.
Maps showing the location of the archaeological sites and features discussed in this booklet.
The creation of fertile and well-drained soil for the nursery required making some changes to the dirt that was already there. Common horticultural practices of the day called for mixing household trash into nurseries in order to improve the drainage and help break up hard clay soils. The soil at Poplar Forest is very clay-rich. As a result, a lot of trash from around the plantation was thrown into the nursery. Analyzing the different types of artifacts helped the archaeologists make direct connections between the nursery and the ornamental plants that once surrounded the house.

**Cross-Site Connections**

Like putting together the pieces of a puzzle, archaeologists have been able to mend fragments of broken ceramic vessels found in the nursery with other fragments found where plants once grew in the ornamental grounds. Connections have been made to tree clumps planted at the corners of the retreat house, flowering shrubs that lined the banks of the sunken lawn, and the corner of Jefferson's wing of offices where white jasmine was planted. A total of seven ceramic vessels found in the nursery also had fragments found in planting features around the house. The direct connections between the plant nursery and the ornamental plantings suggest that trash was being placed in the nursery to loosen the soils of Poplar Forest. Plants growing in these refuse-enriched soils could then have carried fragments of discarded objects in their root balls when they were removed from the nursery and planted in the landscape. Likewise, trash could have been piled in the nursery for use as compost that was then spread around the plants growing near the house.

By looking at when the ceramic vessels found in the nursery were manufactured, the archaeologists have been able to determine that most of them were dumped here around 1812–1813, possibly coinciding with a major construction project on the house that demolished the original kitchen. The creation of the curtilage also took place at this time, which dislocated the residents of a nearby slave quarter that stood in the path of the new fence. It is likely debris from both of these destruction episodes found a new home in the nursery.

**PERSONAL ITEMS AND KITCHEN ARTIFACTS**

In addition to hundreds of ceramic vessels, many other types of artifacts from the early 1800s were also discovered. Much of this cast-off debris gives a glimpse at the lives of the people living at Poplar Forest during this time. This material included kitchen- and dining-related objects, such as fragments of iron pots and utensils. More personal items, such as buttons, beads, coins, marbles, and tobacco pipes were also found.

**Pierced Coin**

This silver coin is a Spanish half real, minted in Mexico in 1789. It has been pierced with a small hole. Piercing silver coins was a common practice among African American slaves, who often wore them around the neck or ankle as charms to ward off evil.

**Good Pipe**

This clay tobacco pipe stem is stamped with the words “good pipe,” and has well-worn grooves from extensive use.

**Mouth Harp**

Mouth harps are small musical instruments that are often found on archaeological sites associated with enslaved African Americans.

**Iron Artifacts associated with Dining and Kitchen Activities**

These iron artifacts include fragments from a pot, skillet, spoon, and two forks.

**Beads and Pierced Disks**

The two glass beads may have been purchased from local merchants while the two lead disks were likely made at Poplar Forest. The purpose of the lead disks may have been ornamental or they may have been used as spindle whorls, a type of weight used to help spin wool.

**ARCHITECTURAL DEBRIS**

A large quantity of architectural debris including brick and stone rubble, cut and hand-wrought nails, window glass, and door hardware was found in the nursery. These artifacts may have come from the destruction of buildings around 1812 or 1813. Some however were obviously the remains from the construction of Jefferson's house, such as two column and corner bricks, designed specifically for use in the octagonal retreat home.

**Column Bricks**

These rounded bricks were specially formed for the construction of the columns of Jefferson's retreat home.

**Iron Artifacts associated with buildings**

These iron artifacts include a lock bolt, wrought spike, staples, the bow and shaft of a key, and a hinge.
The Nursery—Specialized Analysis

In addition to looking at the features and artifacts from the nursery, the archaeologists also studied the microscopic remains from the site. The pollen and chemicals trapped in the soil can give a different perspective on the nursery and illuminate aspects of the past that cannot be seen with the naked eye. Poplar Forest's archaeologists used specialists in different branches of archaeology to analyze samples of soils taken from the nursery.

Pollen

Pollen is among the most abundant plant remains found at archaeological sites. Studying these remains is part of a branch of archaeology called paleoethnobotany, where scientists study the relationships between people and plants in the past. Numerous samples from the gully were analyzed to see what the environment was like before and during the use of the area as a nursery. Research by Susan Jacobucci and Dr. Heather Trigg of the Fiske Memorial Center for Archaeological Research at the University of Massachusetts Boston has provided a profile of plants that once grew in the area, starting from the time of the gully's creation. This pollen profile reveals a landscape actively transformed by human activity, with many weed species found in the earlier layers of the gully. These species often indicate open spaces that have been cleared of trees and plowed up. The plants seen in the pollen profile most likely mark the first efforts to create fields and begin crop production on the plantation. These efforts probably increased erosion and created the gully by removing all of the trees in the immediate area.

In the upper layer of the gully, which was filled to create the nursery, there is an interesting appearance of a certain type of pollen not seen in the lower layers. Pollen from wheat, oats, barley, and rye suddenly appear in the nursery soil. While these plants were grown on the plantation for sale and human consumption, they could also be fed to livestock. It is very likely that the pollen of these grains entered the nursery in the manure of nearby animals, possibly those kept in the stable that documents report standing near the nursery. In this same layer there was an increase in pollen from ornamental species, such as willow, and the presence of pollen from the flowering shrub rose of Sharon. Willow trees were used to great extent in the ornamental landscape, attested by the fact that Jefferson documents removing 50 willows at one time from the nursery to plant around the house in 1812. Rose of Sharon was used in the plantings along the banks of the sunken lawn.

Geoarchaeology

Geoarchaeology is a branch of archaeology, in which scientists use a special set of geological research skills to study the soils, sediments, and landscapes of archaeological sites. Samples of soil were collected by Poplar Forest's archaeologists in order to understand better how the gully formed and whether there were any chemical signatures that might indicate attempts to fertilize the nursery soil.

Research by Jason Windingstad, under the direction of Dr. Sarah Sherwood of the Archaeological Research Laboratory at the University of Tennessee, has shed considerable light on the history of the nursery’s filled-in gully. By looking at the actual size of the grains of soil their analysis has shown that much of the soil in the lower layers of the gully was deposited as sediment from water running through the feature. Periodically there were “pulses” of sediment deposition that indicate larger volumes of water washed through the gully, possibly the result of large rain storms sweeping soil off of the plowed fields. This would be expected in an agricultural landscape, and as pollen analysis has shown, this area was most likely cleared of trees.

The chemicals that remain in the soil from past human activities were also examined by the geoarchaeologists. Chemical elements in the different layers of soil in the gully were determined by dissolving the soil samples in acid and running the solution through a mass spectrometer. Results have been exciting, showing relatively high levels of phosphorous and barium within the nursery layers of the gully. These chemical elements indicate greater amounts of organic material, with phosphorous found in animal manure and barium found as a byproduct of decaying vegetation. These findings support the idea that deliberate attempts were made to increase the productivity of the soil by adding organic fertilizers such as manure, and that there may have been attempts at composting vegetation.
The Antebellum Cabin

Archaeological evidence of enslaved laborers living at Poplar Forest in the years following Jefferson comes from the archaeological remains of a slave cabin occupied from about 1840 to 1860. This cabin was located on a man-made terrace 300 feet southeast of the main house and just south of a brick slave cabin built about 1857. The remains of the cabin that once stood here consist of a subfloor pit, several postholes, and a stone hearth/chimney.

Chimney Base
Archaeologists discovered the remains of a destroyed stone chimney in 2001 during an archaeological survey of the terrace. When the test unit was expanded, an 8 x 5–foot base of large, concentrated fieldstones was revealed. Some of these stones were cut and shaped. A subtle change in the soil west of this chimney base was interpreted as either the remains of a packed dirt floor, or soil that had slipped between the floorboards onto the ground below. When studied together, the placement of this soil layer and the adjacent chimney base suggest this building was most likely aligned southwest to northeast.

Subfloor Pit
Archaeologists discovered a 3 x 3–foot subfloor pit about two feet southwest of the chimney. An unknown portion of this feature was sheared off by plowing in the late nineteenth or early twentieth century. In addition, a planting hole, a planting trench, and a rodent burrow also impacted the surface of the pit. Each of these features contained artifacts that appear to have come from the disturbed subfloor pit.

Archaeologists have found similar subfloor pits elsewhere, located inside the remains of some slave dwellings found in Kentucky, Maryland, Mississippi, Missouri, North Carolina, and Virginia. These features were used by enslaved laborers as storage spaces for food and personal objects. Some former slaves in Virginia remembered using these pits to store sweet potatoes.

Subfloor pits are rich in archaeological data because they contain the remains of everyday life that took place within enslaved households. And, because they were dug deeply into the ground, they were less often damaged by the plow, which frequently disturbs the remains of sites found where agriculture had been practiced in the past.

This subfloor pit contained a wealth of artifacts, macrobotanical remains, and animal bones. Each of these sources of information contributes toward a rich interpretation of everyday lives of enslaved laborers living at Poplar Forest during the antebellum period.

“There was no wooden floor in our cabin, the naked earth being used as a floor. In the centre of the earthen floor there was a large, deep opening covered with boards, which was used as a place in which to store sweet potatoes during the winter. An impression of this potato-hole is very distinctly engraved upon my memory, because I recall that during the process of putting the potatoes in or taking them out I would often come into possession of one or two, which I roasted and thoroughly enjoyed.”

—Booker T. Washington, Up From Slavery, 1901

Booker T. Washington was born on a plantation in Franklin County, Virginia about 25 miles from Poplar Forest.
The Antebellum Cabin—
Material Culture

Material remains from enslaved households provide a means to look at what it meant to be a slave from an inside perspective often missing in historic documents. Before emancipation, enslaved people were engaged in a significant informal economy of property ownership and trade throughout the South. This was particularly true during the nineteenth century. Enslaved laborers earned money by growing crops in their gardens and selling them to other slaves, their owners, or at local markets. Money was also earned by creating and selling crafts, such as baskets, and providing services, such as sewing or repairing shoes. These kinds of activities were significant, because they gave enslaved folks the means to obtain some of the goods they needed and desired, which allowed them to exercise a measure of control over their daily lives and provided a degree of personal empowerment within the context of slavery.

Personal Adornment, Health and Well Being

Merchant account books for central Virginia suggest that cloth, sewing supplies, personal adornment items, alcohol, and sweeteners were the most common purchases of slaves in the antebellum period. Artifacts found at the antebellum cabin at Poplar Forest reveal the significance of sewing supplies and personal adornment items to the people who lived there.

Sewing tools, files, and a folding knife indicate work activities taking place within the home. A count of complete pins and headed pin fragments yields at least 277 brass pins from the subfloor pit alone. In addition, 341 buttons and partial buttons were recovered from the cabin. This evidence strongly suggests a seamstress lived in the cabin.

Personal adornment was a significant means through which the enslaved expressed themselves and possibly challenged their status. Fashion served as a means for enslaved African Americans to define themselves according to their own perceptions. Clothing also served as a means for some enslaved workers to pass as free blacks or whites, or simply disguise themselves if they ran away.

Along with several clothing fasteners, 149 glass seed beads, twenty-three wound-glass beads, four paste jewels, three copper-alloy earrings, one bone bead, and a single carnelian brooch were among the many personal adornment items found. Some of these objects, such as the earrings, were likely worn to enhance personal appearance, or express personality. Others, such as glass beads, a pierced Spanish real with teeth marks, and a clothing fastener made in the shape of a human hand, may have played additional roles in promoting health and well-being within the enslaved community.

The archaeological record reveals that enslaved laborers relied on spiritual practices, medicinal plants, homeopathic and patent medicines to ensure, maintain, and restore health and well-being. A Bedford Alum Springs bottle was found in a layer on top of the chimney base at the antebellum cabin. In the nineteenth century, alum water was believed to have medicinal properties. Edward and Emma Hutter and Marian Cobbs visited several mineral springs in Virginia to improve their health and likely shared these remedies with the enslaved community.

From top, left to right: Alloy fist-shaped clothing fastener; Pierced Spanish real with teeth marks; Napier pattern plate; Rubber hair comb and button; Personal adornment objects; Alloy spoon with incised X’s on handle; Bedford Alum Springs water bottle.
The Antebellum Cabin—Specialized Analysis

Macrobotanical Analysis
Macrobotanical remains are the archaeological remains of plants, which can be seen with the naked eye. Macrobotanical remains typically consist of charred seeds, nuts, shells, wood, and other botanical tissue. Studying these plant remains provides information about diet, health and wellbeing practices, and other human activities, such as the production of crafts or the gathering of firewood. The types of plants recovered from an archaeological site can also provide insight into ecological interactions that have occurred between people and the world in which they lived. Jessica Bowes, under the guidance of Dr. Heather Trigg at the Fiske Mispero Memorial Center for Archaeological Research at the University of Massachusetts Boston, investigated the macrobotanical remains of the subfloor pit. Preservation of plant remains within this feature was excellent, and unparalleled in the past twenty-four years of archaeology that has taken place at Poplar Forest. The result is a wealth of data that is providing fresh insight into the lives of the enslaved laborers who lived at Poplar Forest during the antebellum period.

Analysis of the macrobotanical remains was limited to charred plant remains and charred wood, because charred plant remains are typically the result of human activity. Results revealed enslaved laborers used local plants for food, fuel, and probably medicines. A variety of fruits, grains, and nuts were recovered, which provide insight into the diet of the cabin’s residents. The remains of mint and Jimsonweed within the subfloor pit suggest that slaves could have been cultivating plants for medicinal uses. Jimsonweed was sometimes used by African Americans to treat worms and respiratory problems in the nineteenth century, while mint has multiple medicinal uses.

Corn remains were found throughout the pit. A starchy substance, which was likely the remains of charred potato, was also found in every layer within the pit. Enslaved laborers at Poplar Forest grew corn in their gardens to sell at the market in Lynchburg and for personal consumption. Edward Hutter planted sweet potatoes at Poplar Forest, and enslaved African Americans may have cultivated these in their gardens as well. Root crops, like sweet potatoes, were often stored in subfloor pits located near a hearth for radiant heat which facilitated preservation.

Charred wood was present through the layers in the subfloor pit. Of the 1,525 pieces of wood analyzed, 68% were fragments of hardwoods, 2% were fragments of softwoods, and 30% were unidentified. The charred wood remains likely represent fuel for heating or cooking. Most of the wood burned was preferable firewood, such as oak and hickory, and only a small quantity of wood was low quality firewood, such as pine.

Faunal Analysis
Zooarchaeology is the study of animal (also referred to as faunal) remains from archaeological sites. These remains usually consist of the hard parts of the body, such as bones, teeth, and shells. Dr. Walter Klippel of the Department of Anthropology at the University of Tennessee at Knoxville analyzed the faunal remains recovered from the subfloor pit of the antebellum slave cabin. Slightly over 35,000 animal bones and bone fragments were found in the pit. Dr. Klippel found that most of the faunal material recovered inside the pit within the antebellum cabin came from mammals (64%), followed by birds (21%), fish (15%) and reptiles (1%).

The enslaved African Americans who lived at Poplar Forest during the antebellum period added meat to their diet in a number of different ways. Sometimes meat was provisioned by William Cobbs or Edward Hutter, while at other times it was hunted, trapped, or fished. The mammal assemblage was dominated by cottontail rabbit (68%), with a smaller percentage of pig (15%), and sheep/goat (13%). Opossum (2%), woodchuck (1%), cattle (.7%), and tree squirrel (.5%) were each represented in small numbers. Aside from pig and sheep, most of these animals were not typically provisioned, suggesting that the people who lived in the cabin hunted or trapped for a significant portion of the meat they ate. A sear lock and percussion caps from a rifle were recovered from the site also suggesting that someone living in the household was hunting.

Fish remains from the subfloor pit consisted of mackerel (37%), herring (30%), catfish (16%), minnow (15%), and eel (5%).

Robert Williams, a former slave who lived on a plantation adjacent to Poplar Forest, recalled fishing during slavery. Catfish and eel were found in local rivers and streams, while minnows were probably from the creeks and streams on and around Poplar Forest plantation. Enslaved laborers were likely obtaining these freshwater fish on their own.

Mackerel and herring are fish from the ocean which were probably provisioned by Edward Hutter to the enslaved. The size of the mackerel bones indicates that the mackerel found in the subfloor pit were the small size typically purchased for slave provisions. Cut marks on the bones indicate that the mackerel was processed in a unique way necessary for shipment in barrels. Hutter documented the purchase of mackerel in 1856 and 1858. He also purchased fishing lines and hooks in 1858 and 1860. Thus Hutter was likely aware of, and actively supported, the fishing activities of the enslaved community as it lessened the amount of food he needed to purchase for his slaves.
Interpretations

Combining the results of the excavations with the laboratory analysis begins to reveal a great deal of information about Poplar Forest’s past. At the most basic level, archaeologists are able to identify the function of the two sites: one as a plant nursery and the other as a cabin to house enslaved workers. These sites also provide a much deeper understanding of the past, giving new insight into the lives of Poplar Forest’s many residents.

The Creation of Beauty

Thomas Jefferson’s desire to create ornamental gardens at his retreat took an enormous effort, with a plant nursery required to simply raise the hundreds of trees needed to create his designed landscape. Based on the excavations of the nursery, it is evident that considerable labor was needed to keep plants alive in the Virginia piedmont. Creating proper drainage in these clay-rich soils would have been difficult for those who were charged with tending to Jefferson’s plants. Pads of brick and large amounts of artifacts and other debris, thrown in to loosen the nursery’s soils, attest to this fact. Organic signatures also suggest fertilizing was needed to enrich soils exhausted by years of tobacco production. The stone-lined drain was likely built to bring in the water and nutrients needed to keep the ornamental plants alive, especially in the hot Virginia sun.

All of this work was done by Poplar Forest’s slaves, alongside the many other tasks needed to raise crops for market and keep the plantation running. It is clear that for Jefferson, obtaining an ideal form of beauty within his retreat was just as important to him as making a profit on his plantation. He believed beauty to be something all people could appreciate, and he felt that creating beautiful landscapes had the power to intellectually stimulate his fellow citizens. But, for the enslaved African Americans who were charged with the realities of building and maintaining these “works of art,” their view of these ornamental landscapes—that took so much effort to maintain—would have been much different.

Slaves as Consumers

Social and economic conditions were changing rapidly in the antebellum period. Changing conditions impacted the lives of enslaved laborers during this era in positive and negative ways. An important change was increased access to the market economy. Enslaved laborers at Poplar Forest produced goods and services, such as garden crops, poultry, crafts, and sewing, to barter and sell to each other, to members of the Cobbs and Hutter families, and for market exchange. Production of goods and services rendered on their own time provided the enslaved with a degree of autonomy because they were not completely dependent upon the slave owner for all of their needs.

Several enslaved workers at Poplar Forest had access to money. Some of these workers also had access to the market. Lucy and Matilda were house servants. One of their tasks was to go to Lynchburg to purchase things for the Cobbs and Hutter family. On these trips, these women were exposed to people who lived outside of the plantation who could introduce them to ideas, objects, and people beyond their everyday social networks.

After food, personal adornment items were the most common objects purchased by the enslaved in the antebellum period. The abundance of personal adornment items found at the antebellum cabin at Poplar Forest indicates the importance of self-fashioning and personal appearance to the residents. The hand charm, glass beads, and pierced coin allude to spiritual or well being practices and suggest that these mundane objects had multiple meanings. These artifacts recall some of the ways that people sought to protect and empower themselves from the harsh realities of daily life within a system of slavery based on race.
Future Research

The excavations and analysis on these two sites are just the beginning. Many questions remain and future work will help interpret these sites and the history of Poplar Forest better. Locating the nursery has opened up the possibility of finding other important structures and areas that documents suggest stood nearby, such as stables, gardens, and slave quarters. A tightly-packed cobblestone surface has been found just west of the nursery, protected by a thick layer of bright red clay. Jefferson Period artifacts and features found beneath this layer of clay include brick and stone rubble, wrought nails, creamware ceramics, and perhaps even a slot trench, used for a picket fence. These features need to be explored further to see if they are the remains of Jefferson’s stables.

One innovative way to explore these buried features would be to use geophysics. Geophysics provides techniques, such as ground-penetrating radar, which allow archaeologists to look beneath the ground before they even excavate. This technology will help archaeologists to trace the size and shape of the features they have already discovered, showing exactly where they continue beneath the surrounding soil. This can lead the way towards future excavations. Geophysics can also reveal things yet to be discovered and could help identify the locations of Jefferson’s vegetable garden, orchards, and the numerous plantation outbuildings that stood on the property, such as barns, slave quarters, overseers’ houses, and a blacksmith’s shop. Geophysical techniques are particularly well suited for finding burned structures as well. This could help locate the cabin of a slave named Lydia, which burned in 1854, as well as the home used by Hutter’s overseers, which was burned by arsonists in 1866.

Further excavations and research into the enslaved community at Poplar Forest is a particularly important goal of the Archaeology Department. Locating the remains of more cabins where slaves lived during Jefferson’s ownership of the property would provide better data for understanding how their lives were impacted by the switch from tobacco to wheat as well as what effect the creation of the retreat and ornamental grounds had on the daily lives of these individuals.

Excavating the remains of at least one more slave cabin that dates to the Cobbs’ and Hutter’s ownership of Poplar Forest would provide excellent comparative data to understand what life was like for slaves living in the antebellum period. The remains of another cabin would allow archaeologists to investigate the differences between households in the antebellum period and to begin to understand if the relative abundance of artifacts recovered at Site A was typical for the time period. Excavating Lydia’s cabin from this time period would provide a rare opportunity to study a slave household associated with a known individual.

As a point of comparison, Poplar Forest’s archaeologists also need to find and excavate the overseers’ houses from Jefferson’s ownership through emancipation. Relatively little archaeological investigation of overseers’ dwellings has been undertaken. This type of research is important for what it can tell us about the daily lives of these people and their families who often occupied the social middle ground between plantation owners and slaves. This data is necessary for understanding social class and race relations on the plantation.

Another avenue of research would entail revisiting the entire collection of artifacts from all of the sites excavated at Poplar Forest. As a project that has been ongoing for twenty-four years, archaeological investigation at Poplar Forest has seen many technological and methodological changes that impact the way excavations are conducted, materials are processed, and data is recorded. Consequently, a reanalysis of material collections would provide a way to standardize the Poplar Forest archaeology database, making comparisons between sites at Poplar Forest easier to achieve.

Finally, it is important to continue the investigation of twentieth century life at Poplar Forest to understand the changes that took place at the plantation after emancipation and how these changes affected the lives of all of those who lived and worked at Poplar Forest. We would like to collaborate with descendant communities to create an archive of information about the lives of people connected to Poplar Forest. This archive will be kept in the library on the property and made accessible to people interested in researching family history connected to Poplar Forest.
No occupation is so delightful to me as the culture of the earth, and no culture comparable to that of the garden.
—Thomas Jefferson to Charles Wilson Peale, August 20, 1811, from Poplar Forest

Archaeology at Poplar Forest is ongoing and there is still much we have to discover and learn about the people who lived and worked here in the past. Come and follow us on our journey at www.poplarforest.org.

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