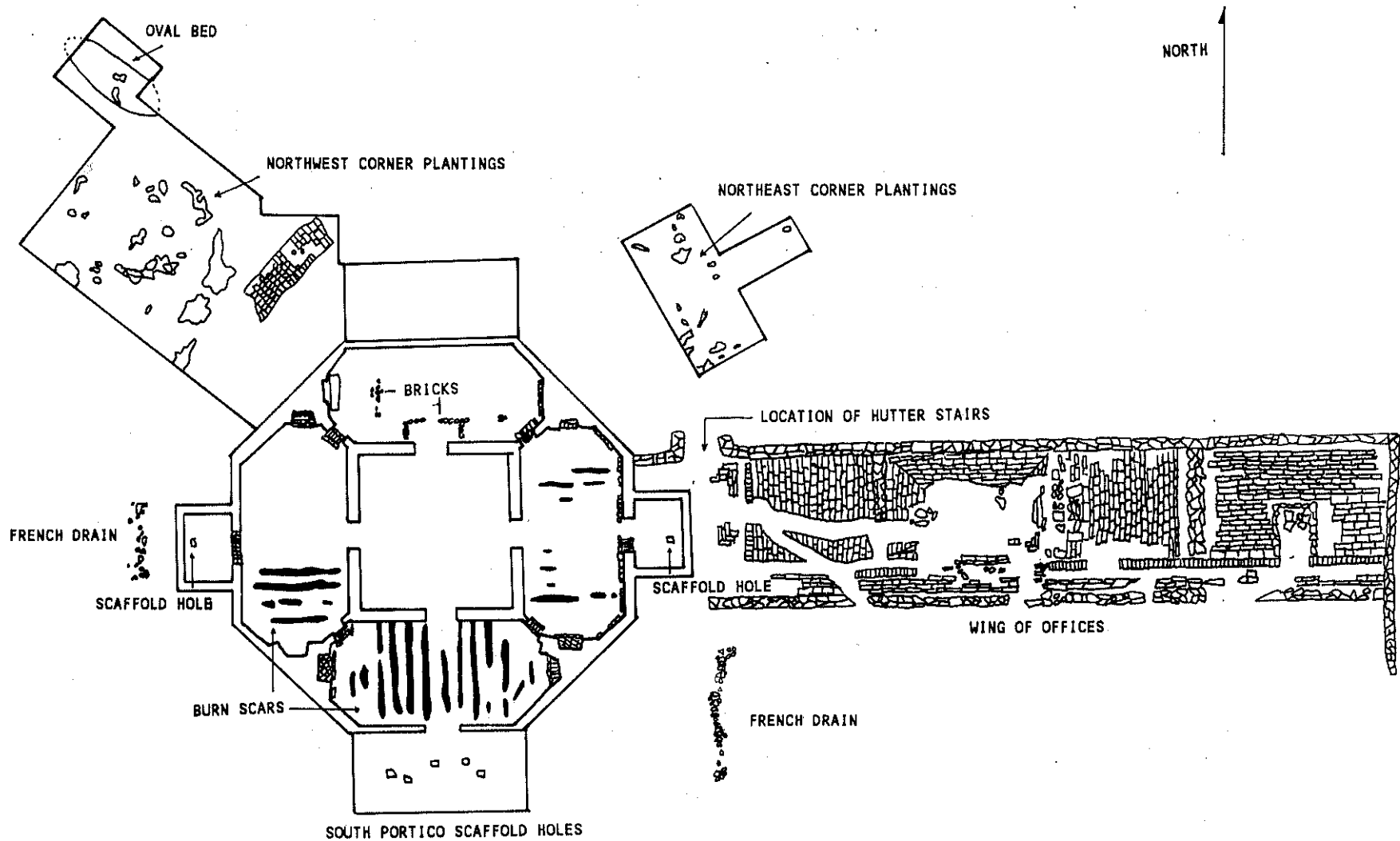


A REPORT ON THE 1992-1993 EXCAVATIONS:
THE PERIMETER OF THE HOUSE
AND EXCAVATIONS RELATED TO RESTORATION
DRAINAGE/FOUNDATION WORK
AT
POPLAR FOREST, FOREST, VIRGINIA

by

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1993



FRONTISPIECE

SCALE: ONE INCH EQUALS TWENTY FEET

BJH

1993

TABLE OF CONTENTS

I. INTRODUCTION.....1

II. FIELD AND LABORATORY METHODS.....3

III. A BRIEF HISTORY OF POPLAR FOREST.....5

IV. THE BASEMENT OF THE HOUSE.....12

 The North Room.....14

 The South Room.....20

 The East Room.....24

 The West Room.....29

 The East and West Stair Pavilions.....29

 Conclusions.....32

V. THE SOUTH YARD.....33

 The South Portico.....33

 The French Drain.....42

VI. THE WEST YARD.....48

VII. THE NORTHWEST YARD.....49

 TheClump.....49

 The Oval Bed.....67

 Conclusions.....73

VIII. THE NORTHEAST YARD.....75

 TheClump.....75

 DrainSurvey.....78

 FoundationUnits.....82

IX. CONCLUSIONS.....90

BIBLIOGRAPHY.....93

APPENDIX 1, RECOMMENDATIONS FOR FUTURE WORK.....96

LIST OF FIGURES

FIGURE 1.....7
FIGURE 2.....9
FIGURE 3.....15
FIGURE 4.....17
FIGURE 5.....19
FIGURE 6.....21
FIGURE 7.....23
FIGURE 8.....25
FIGURE 9.....28
FIGURE 10.....30
FIGURE 11.....35
FIGURE 12.....39
FIGURE 13.....41
FIGURE 14.....43
FIGURE 15.....45
FIGURE 16.....47
FIGURE 17.....50
FIGURE 18.....53
FIGURE 19.....55
FIGURE 20.....63
FIGURE 21.....65
FIGURE 22.....71
FIGURE 23.....72
FIGURE 24.....79

LIST OF TABLES

| | |
|--------------|----|
| TABLE 1..... | 36 |
| TABLE 2..... | 36 |
| TABLE 3..... | 62 |
| TABLE 4..... | 77 |

I. INTRODUCTION

This report presents the results of archaeological excavations at Jefferson's Poplar Forest, the majority of which were undertaken during 1992 and the spring of 1993. Because it is intended to provide a comprehensive summary of findings resulting from excavations adjacent to the foundations of the house, it also includes discussions of excavations completed prior to 1992 but previously unreported. The report has two foci: first, it details investigations intended to answer specific architectural questions relating to the basement and roof of the house and to its perimeter. Second, it summarizes the results of excavations undertaken to mitigate the impact of extensive exterior conservation work on the house foundations carried out during the summer and fall of 1993.

This conservation project entailed exposing the foundations and digging under them to install concrete footings, conserve and waterproof the foundation brickwork, and provide a new drainage system for the structure. The trenches dug to accomplish this work disturbed all soils within 5' of the north side of the house, and approximately 3' on the south. Along the west side of the north portico, the trench widened to nearly 7'. In addition to the foundation work, conservation needs necessitated the creation of a 4' wide, 320' long drainage trench running from the northeast corner of the house to a point just west of the North Grove. An old fuel oil tank was removed northeast of the house, and

a concrete box installed in its place to house the manholes necessary to service the drainline.

Much of the archaeological work described below preceded construction. In the 1940s, waterproofing and drainage was installed around the perimeter of the foundation. It disturbed all of the soil within approximately 2.5'-3.0' of the foundation, and failed to keep the basement dry. Archaeologists selectively examined disturbed soils looking for artifacts and for the remains of features beneath the drainage trenches, and expanded excavations into the undisturbed areas which were threatened by the 1993 conservation project.

Earlier archaeological excavations on the northwest side of the house (1991-1992) and in front of the north portico (1990) had already explored most of the threatened areas in these locations. Findings from each area are presented elsewhere (Kelso, Patten and Strutt 1991; Strutt 1992), though the discussion of findings in the northwest corner was preliminary (Strutt 1992), and has been expanded below. Additionally, archaeologists excavated contiguous units along the northeast face of the house, and in the undisturbed area abutting the fuel tank. Here, they uncovered information relating to Jefferson's original landscape design which expanded on discoveries made on the northwest side of the house. This report will include a discussion of the findings from the excavations of both the northwest and northeast

fronts completed in 1993.

Since most of the stratigraphy adjacent to the south face of the house had been disturbed either by the twentieth century installation of a grease trap just east of the south portico, by modifications to the portico itself, or by grading in the 1940s intended to alleviate water problems in the basement, the south face was not archaeologically excavated prior to the commencement of construction. Instead, a staff archaeologist monitored all digging in this area.

The excavations and analyses presented below were directed by the author, Barbara Heath, and supervised by the Archaeological Field Supervisor, Michael Strutt, former Archaeological Laboratory Supervisor, Susan Trevarthen Andrews, and current Laboratory Supervisor, Alasdair Brooks. They were assisted by excavators Hannah Canel, Liza Fauber, Jean Fulton, Sonja Ingram, Ivan Kirby, Mintcy Maxham, Martha Moore, Kimberly Ogden, Katherine Saunders and Marca Wesen Bondurant. Jeff Durand, Barbara Fegan, Jennifer Quinones, Juliana Temporal and Brenda Tinnell, participants in the 1992 Poplar Forest-University of Virginia archaeological field school, assisted in excavations of the northwest corner.

II. FIELD AND LABORATORY METHODS

Field strategies varied from testing to full scale excavations to monitoring of backhoe operations. Where appropriate, comments on specific field methods will accompany

the description of individual units or areas presented below. In general, excavation units varied in size, depending on the proposed route and depth of construction, and on the presence of earlier test units in the area. For those excavations undertaken prior to construction, topsoil and modern layers and features were removed by shovel, with soils trowel sorted in wheelbarrows. Soils from all historic layers were removed by trowel, and screened through 1/4" mesh. All ceramics, glass, metals, organics and synthetics were collected and curated in the on-site archaeological laboratory. Samples of bricks, stones, mortar, concrete or charcoal were saved, and the remainder recorded on field forms and left uncollected. Soil samples from features believed to be planting holes or beds, and from the interface of the deepest layer and subsoil adjacent to such features, were collected for future phytolith analysis.

During the construction project, a staff archaeologist monitored all backhoe excavations, collecting and noting the location of any artifacts uncovered mechanically. Any features uncovered during this phase of work were mapped and investigated before backhoe excavations continued. Additionally, all construction staff were instructed to collect all artifacts that they found and give them to an archaeology staff member. Undoubtedly some features and artifacts were lost during construction, but the presence of the monitor and cooperation of the construction crew greatly

increased data recovery.

Objects uncovered during the project received standard laboratory treatment. All non-fragile materials were washed, labelled and catalogued in the RE:DISCOVERY database, with rare finds being accessioned into the permanent study collection. All objects discovered during excavations of the basement are grouped as HOUSE in the location field, all artifacts from the northwest, north portico and northeast yard excavations are grouped as NORTH YARD, those from the drain trench are grouped as NORTHYARD, those from the units beneath the south portico as SOUTH DRAIN, those associated with the french drain as GREEN, and finally, the unit abutting the west stair pavilion is identified as WEST YARD. No analysis of this material, beyond cataloguing, has been undertaken to date. Future projects should include a comparison of artifacts dating to both the Jefferson and the Cobbs/Hutter period from the northwest and northeast yards of the house, and a comparison between the materials recovered in the french drain adjacent to the west stair pavilion and that south of the wing of offices.

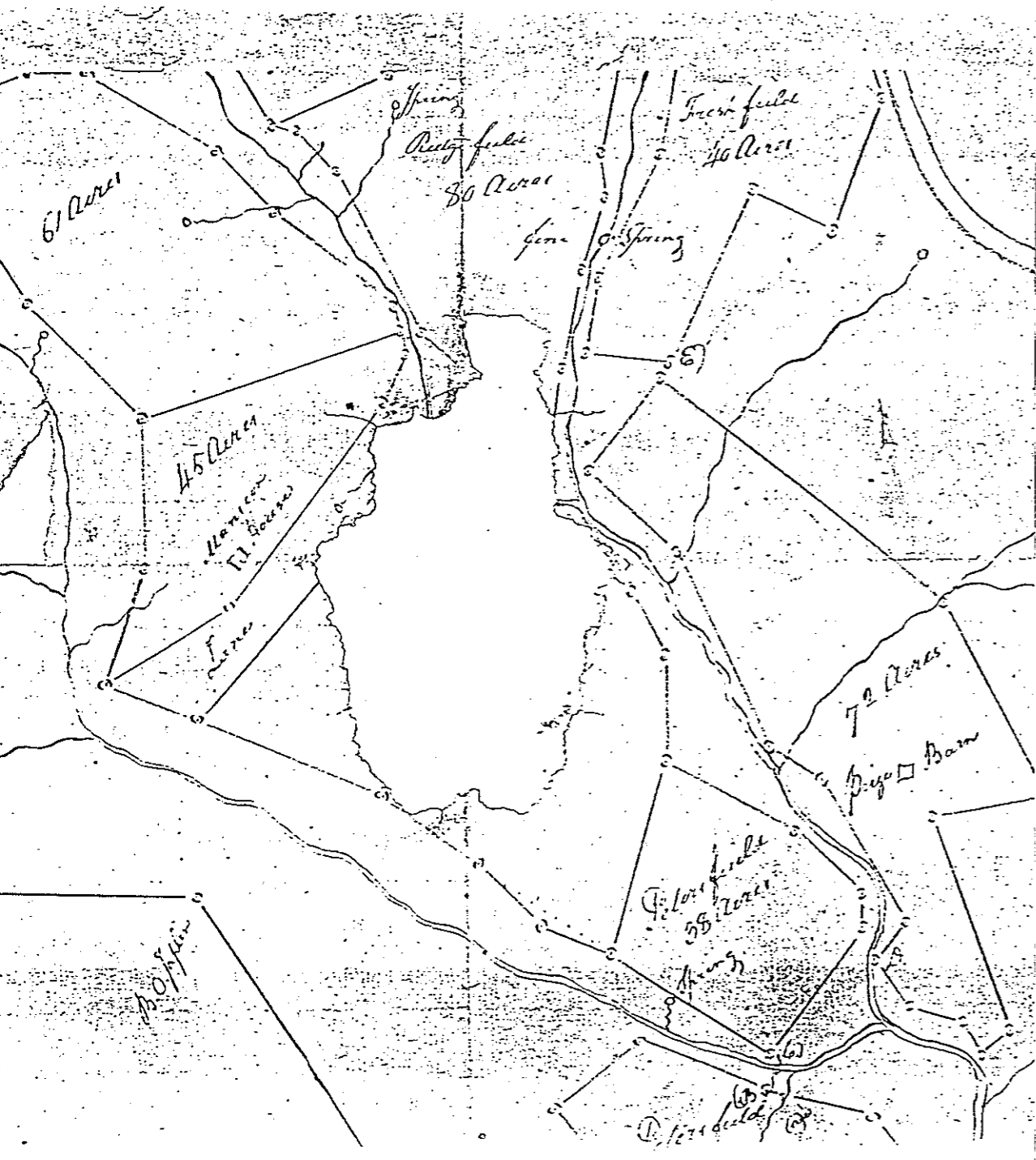
III. A BRIEF HISTORY OF POPLAR FOREST¹

In 1745⁹, William Stith patented a four thousand acre tract of land "at the Poplar Forest...passing the Ridge

¹. For a comprehensive history of the property, see S. Allen Chambers, Poplar Forest and Thomas Jefferson, (Fort Church Publishers, Inc. 1993).

between the Waters of James River and Roanok". Stith's daughter, Elizabeth Pasteur, later inherited the property, and sold it to Colonel Peter Randolph. He conveyed the land to John Wayles in 1764. Upon Wayle's death in 1773, Jefferson inherited the property. With the exception of a prolonged stay in 1781, when he and his family sought refuge at Poplar Forest following the seizure of Monticello by the British, Jefferson's visits to his Bedford holdings were sporadic in the final decades of the eighteenth century.

Slave lists in his Farm Book, expenses in his Memorandum Book and surviving plats hint at the structure of the plantation, but provide few details for this period. The plantation was divided into two farms named for the waterways that ran through them: Bear Creek to the north and Tomahawk, or Poplar Forest, to the south. Agricultural fields clustered around the creeks, producing tobacco in the early years, and later, wheat, corn, barley and a host of other crops for internal consumption. One early plat refers to the location of the blacksmith Brock's shop, to an overseer's house, to several barns and to the proposed location of a new dwelling along the western boundary of the property (Nichols 255, Figure 1). Two others locate dwellings in Hubbard's field at Bear Creek, most probably quarters for field hands and Hubbard, their enslaved headman. Additionally, they locate a prize barn and, more importantly, a "mansion" or "mantion" house adjoined by "the lane" and the "Shop field" (Nichols 266



Detail of N255, showing Overseer's house and "Overseer's house truly laid down" on eastern edge of property.

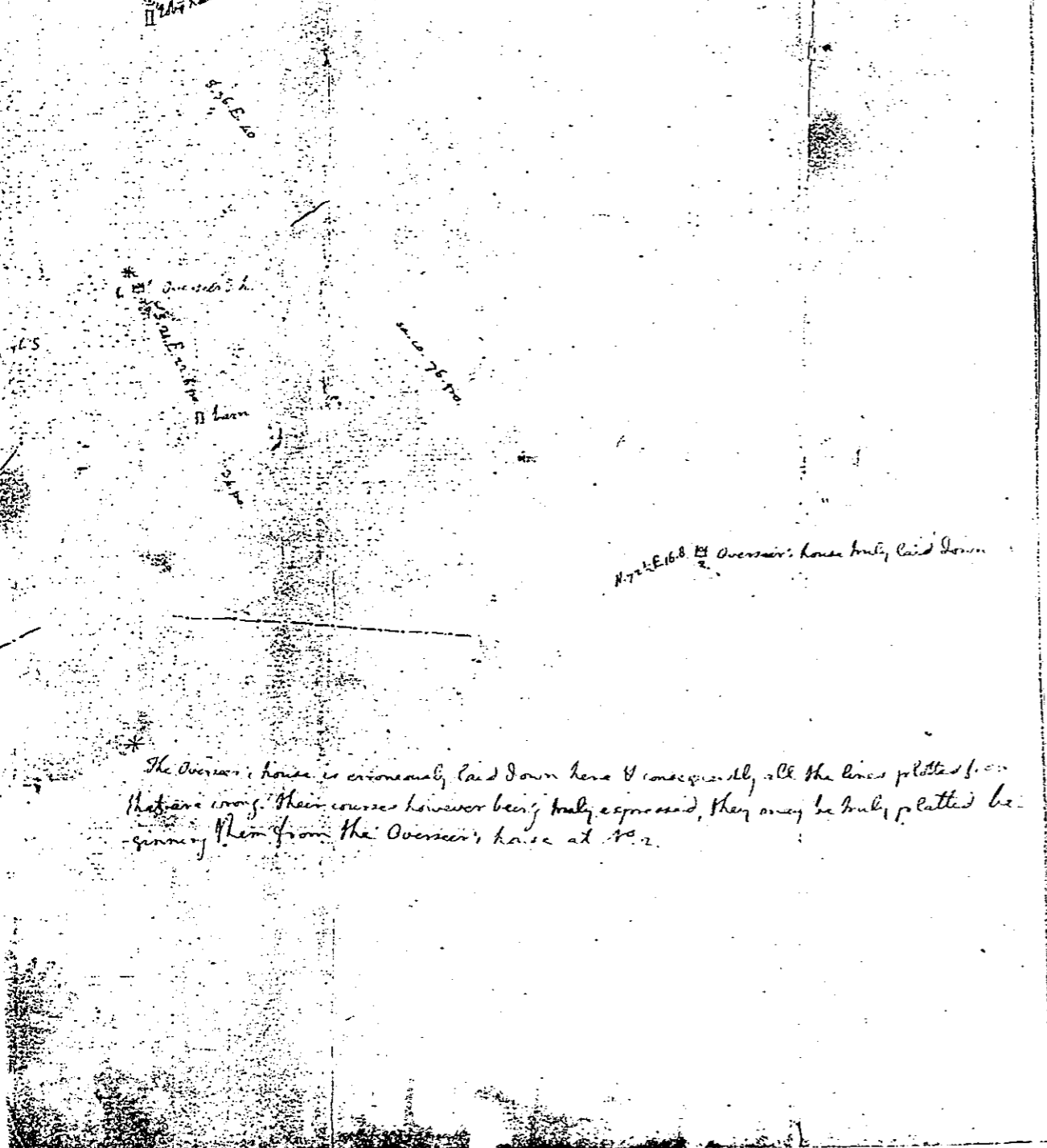
FIGURE 1

and 266a, Figure 2).

Recent work undertaken by landscape architect William Reiley has transformed each of these plats to an identical scale, and overlaid boundaries and structures on a modern topographic map. Significantly, the location of the overseer's house from N255 and the "mansion" house from N266 and N266a, cluster on the same hillside. Thus it is probable that an overseer's house, situated on a knoll some 600-700' east of the site where Jefferson constructed his octagonal brick house, marked the center of the plantation prior to 1806.

Jefferson sent his brickmason Hugh Chisolm to Poplar Forest in 1805, and the foundations for the house were laid in the summer of 1806. By 1809, work was essentially completed on the building, although five years later, construction activities would resume with the addition of a hundred foot long "wing of offices" attached to the east face of the house.

Jefferson created Poplar Forest as a villa: a gentleman's retreat for reading, writing and contemplation set within a garden and supported by a self sufficient agrarian economy supplemented by light industry. From 1806 until his last visit in 1821, he visited Poplar Forest several times a year, staying for a few days or for several weeks. After the house was finished to the extent that he deemed it suitable for feminine companionship, his granddaughters accompanied him on his visits.



Detail of N266 showing Mansion House and Lane. The Shop field is located above (north) of the lane, in the torn area of the map. The Jefferson's house at Poplar Forest was built 600-700' west (left) of the mansion house.

FIGURE 2

To create an appropriate setting for his villa, Jefferson began designing and altering the landscape while the house was still under construction; setting his slave Phil to "the digging" of the south lawn bowling green, and presumably creating earthen mounds east and west of the house with the excavated soil (Chisolm to Jefferson, July 22 and Sept. 4, 1808; Jefferson to Chisolm, Sept. 8, 1808, MHi) In 1811 he formally laid out a kitchen garden, though a less formal truck patch existed on the site earlier (Betts 1944:464-65,467). The following year, ornamental trees and shrubs were planted on the mounds, between the mounds and the house, in clumps at the four "corners" of the house, along the banks of the south lawn, and around the perimeter of a circular road that enclosed the core landscape (Betts 1944:494). Jefferson's vision for Poplar Forest's landscape extended beyond the circular road, however, for in 1812 he also directed his overseer to spend the winter laying out the fences for a 61 acre curtilage, bounded to the north and south by the branches of the Tomahawk Creek (Betts 1944:493).

That year, in a letter to his son-in-law, he described the property thus:

"It [the house at Poplar Forest] is an Octagon of 50 f. diameter, of brick, well built, will be plastered this fall, when nothing will be wanting to finish it completely but the cornices and some of the doors. When finished, it will be the best dwelling house in the state, except that of Monticello; perhaps preferable to that, as more proportioned to the faculties of a private citizen. I shall probably go on with the cornices and doors at my leisure at Monticello, and in

planting & improving the grounds around it."
- TJ to John Wayles Eppes, September 18, 1812

By 1821 Jefferson relinquished most of his involvement in the management of Poplar Forest to his grandson, Thomas Jefferson Randolph. Two years later, another grandson, Francis Eppes, took up residence at the property with his bride Elizabeth. At his death in 1826, Jefferson bequeathed the property to Francis, who sold Poplar Forest to his neighbor William Cobbs in late 1828 and subsequently moved to Florida.

Cobbs purchased the house and 1,074 acres for \$4,925. At the time of its purchase, the house was valued at \$5,000 and the property appraised at \$20,000, so both were sold at considerable loss. Cobb's daughter, Emily, and Edward S. Hutter were married at the property on October 7, 1840, and continued to live there with her parents. Hutter resigned from the Navy in 1844 to devote his life to full-time farming. The Hutters had eleven children, all born at Poplar Forest.

A fire destroyed the roof and interior woodwork of the house in November of 1845. Because the interior partition walls were built of brick, they survived the blaze, as did the exterior walls and the columns on the north and south portico. Following the fire, the Hutters rebuilt the house with significant alterations.

Mrs. Cobbs died at Poplar Forest in 1877 at the age of 76, outliving her husband, her daughter, and her son-in-law.

In the years after her death the second generation of Poplar Forest Hutters began using the house as a summer home. During this time farm managers and tenant farmers lived on the property year-round.

The house remained in the Hutter family for 118 years. In 1946 the James O. Watts family bought the home and lived here on a full time basis. From 1980 to 1983 the house belonged to Dr. James Johnson of North Carolina and was unoccupied. In December of 1983 the house and fifty acres were bought by the Corporation for Thomas Jefferson's Poplar Forest, a private organization whose goal is to open the property to the public and restore it to its original appearance. Today the Corporation owns approximately 500 acres of the original plantation.

IV. THE BASEMENT OF THE HOUSE

During 1991 and the spring of 1992, excavations were undertaken in each of the four octagonal basement rooms to locate evidence of original flooring materials and to find other extant evidence of how the rooms might have been used during the Jefferson period. At the outset of the project, each room was floored with a concrete slab sitting on approximately 0.15' of gravel, installed by the Watts family during the 1940s. This concrete was removed by jackhammer, and all gravel was shovelled to reveal thin deposits of pre-Watts stratigraphy.

Initially, small test units were opened up in each room to determine the depth to subsoil and to attempt to locate specific features. It became apparent that each room had suffered sufficient disturbance in the past, and would suffer substantial disturbance during the upcoming restoration work. As a result, archaeologists decided that full scale excavations were needed to interpret and record surviving evidence. Upon completion of the project in the late spring of 1992, all surfaces in the basement rooms had been exposed and mapped, and all features sampled.

After the modern floor was removed, it became clear that the house was not sitting on top of the foundations as originally laid. "When all the existing walls above grade--as well as the foundations of the outer walls--were constructed, they were rotated approximately 2 1/2 degrees in a clockwise direction about the centerpoint of the octagon" (Corporation for Jefferson's Poplar Forest 1992). Why this rotation occurred is unknown. However, a letter written by Jefferson to his daughter Martha, in which he states "I find by a letter from Chisolm that I shall have to proceed to Bedford...I shall probably be kept there a week or 10 days laying the foundation of the house, which he is not equal to himself" (Jefferson to Martha Randolph, June 16, 1806, MHi), suggests that his mason may have begun the house improperly, and that Jefferson "corrected" it during this visit.

The North Room

Four units were excavated in the north room; ER643 and 644 along the western quarter of the room, ER606 beneath a Watts era closet, and 645, which encompassed the remainder of the floor area (Figure 3). Beneath the concrete and gravel layer, a thin layer of loose brown loam with brick and mortar fragments extended across the room. The layer contained a scattering of artifacts dating from the late nineteenth century into the early twentieth century, including ironstone and flow blue earthenware sherds, cut and wire nails, a paper clip, and a few fragments of glass. The removal of the cement and gravel also revealed surviving brickwork bonded into one wall of the room, and free standing brick remains located beneath a Watts era closet and bathroom wall dating to 1947 (Figure 4).

Bonded into the northeast wall of the room are two stretcher courses of bricks laid on edge and protruding from the face of the wall. Although length could not be determined, the bricks were approximately 3" wide and 2 13/16" thick. The bricks in the lower course are unbroken and at an angle to the wall above, while those in the second course are broken off, and are oriented with the wall itself. The first course may relate to the construction of the wall prior to the 2 1/2 degree rotation, while the second may represent some adjustment made in re-aligning the wall. It is also possible that the second course represents the remains of a Jefferson

ADDENDUM TO REPORT ON EXCAVATIONS AROUND THE MAIN HOUSE

During the footer construction phase beneath the north portico of the main house, archeology was conducted on soils uncovered by the construction team in February 1994. A cement wall had been placed around the perimeter of the space beneath the portico in the 1940's. The cement encased intact historic stratigraphy, but was to be removed along with the soil behind it. The soils were abutting the walls of the portico in what had become a storage room entered by a doorway from the north room of the basement. The cement walls held soil against the stone footer of the portico for a width of two feet out from the footer, and nearly four feet deep. (DRAWING or photo). Some of this soil column was excavated by hand and screened for artifacts. This work was done in preparation of constructing a cement foundation below the stone footing of the portico. That construction work will remove all of the soils beneath the portico to a depth of four feet below the soil level in the north room.

The stratigraphy concealed by the cement consisted of a brown silty clay, a red clay with brick and mortar frags., and a red clay with charcoal above subsoil. Beside and intruding these layers is the remains of the builders trench for the north wall of the house, consisting of an orange red clay mixed with greenstone and mortar. The top layer of brown silty clay averaged a thickness of .15 foot and held only one artifact, a stone flake. The next layer of red clay with mortar and brick frags., is the builders' trench for the

FIGURE 3

portico walls. It too is very thin, averaging less than .2' deep. It intrudes into the brown silty layer, and the portico walls go down through the brown into the red clay layer below. This builders' trench was also seen sitting on top of the brown silty clay in some locations. That evidence clearly indicates that the brown silty clay was grade at the time of construction of the portico.

The next layer is a red clay with charcoal and is redeposited subsoil that probably came from the excavation for the house footing and wine cellar. It appears that during the construction of the house, workmen spread the excavated subsoil around the site. This soil was found in excavations in front and beside the portico from 1989 to 1993, ^b But it was not until the excavations beneath the portico that this layer of soil was understood.

The red clay and other layers above it were later intruded upon by the builders trench for the north wall of the house. (PROFILE OF 1075 AND 1076 or photo). The north wall builders' trench survived in two locations behind the cement wall, and was excavated archeologically. No artifacts were found. However, it is clear from the stratigraphic evidence that the brown and red clay layers were cut by this builders' trench. The trench was excavated in a sloping manner up to one foot from the bottom, where the sides were cut straight and narrowed to only wide enough to fit the wall in. The last four courses of the wall were then laid into this tight fitting trench.

Soil stains can be seen on the walls above the level of the brown silty clay. These stains led us to initially think that the original soil level beneath the portico was much higher. However, with the stratigraphic evidence, and the fact that there are burn scars on the first brick course of the walls, it is clear that the soil stains are from a later time period. On the east wall of the portico the soil staining can be found on top of Hutter period mortars. There must have been earth moving activities beneath the portico after the fire of 1845. But this extra soil was probably removed during the 1940's when the cement walls were constructed below the portico.

As stated above, several of the layers found below the portico were seen in other excavations near the house. The brown silty clay layer was seen north of the portico below the stairs. The red clay with charcoal was found north, east, and west of the portico. Because of excavations below the portico in 1994 the stratigraphy around the house is now more fully understood. Although the brown silty clay contained later period artifacts outside of the house, this is due to occupation of the site after construction. But from the undisturbed contexts beneath the portico, the brown layer dates to sometime before the walls of the portico were constructed in 1807 or 1808. The red clay redeposited subsoil was also seen in excavations around the house and contained later artifacts. But like the brown layer we know that it must pre-date the portico.

The sequence of soil deposition below the portico reads like

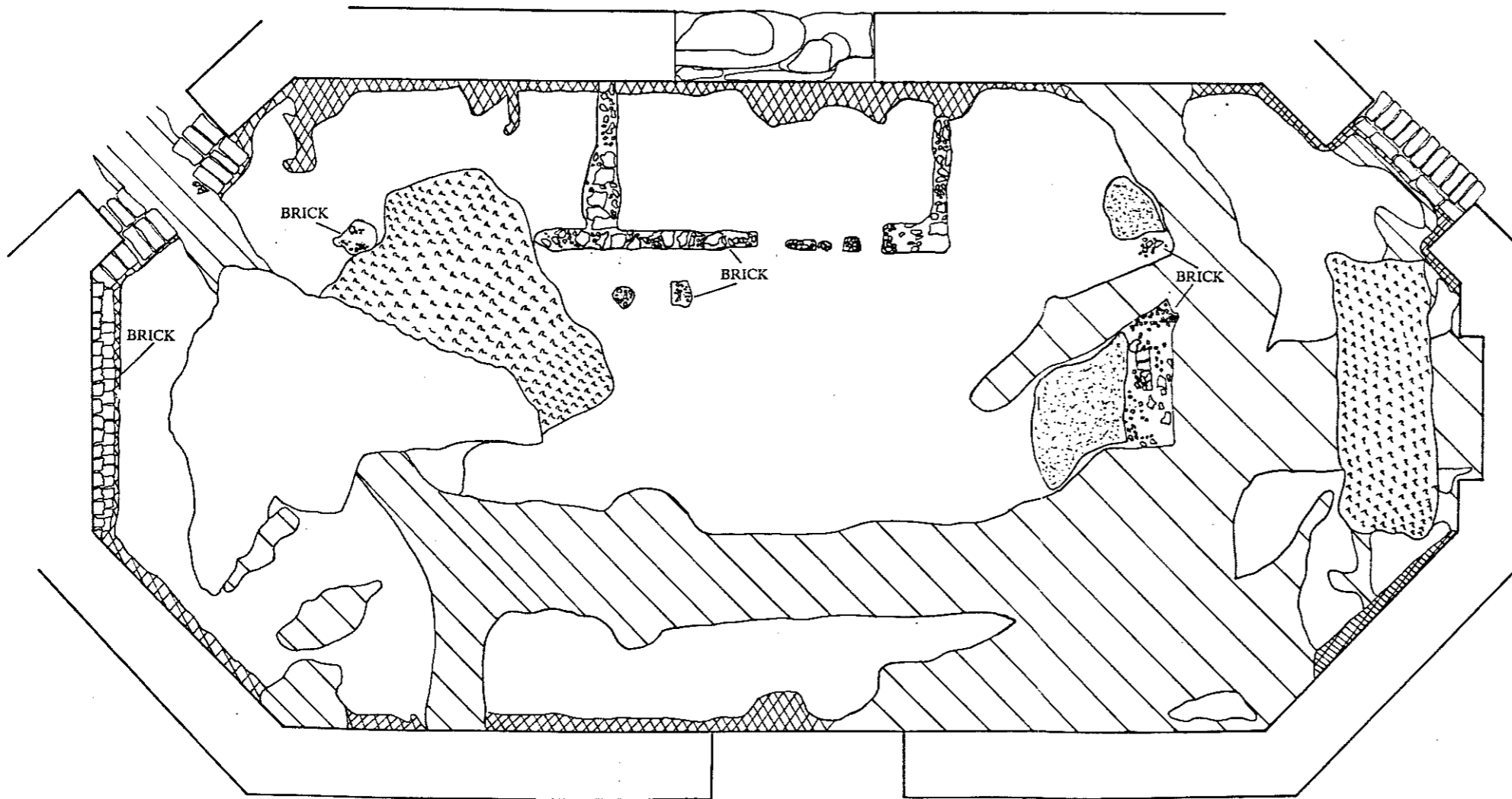
a time line of the construction and occupation of the house at Poplar Forest. Sometime in 1806, probably in the summer, excavations for the house began. After workmen spread out the subsoil they had excavated from the site to make the basement and wine cellar, a thin layer of brown silty clay accumulated on the surface of the construction site. The suprising thing about this particular layer is that no artifacts from the construction were found. This is also true of the builder' trench to the north wall. Apparently it was a very clean construction site. On September 7, 1806, Jefferson wrote to Hugh Chisolm and ordered the stair pavillions and porticos to be built. On June 1, of the next year the south portico was done up to the watertable, but there is no mention of the north portico. Presumably it was done in the same year. From the stratigraphic evidence it is clear that when the north wall of the house was built, the trench for it cut into the layer of brown soil accumulating on the site, and the subsoil that the workmen had spread about the area just one year before. When the portico was constructed the builders' trench for that part of the house intruded upon all the layers previously discussed.









period brick floor, although it is unclear why such a floor would have been taken out.

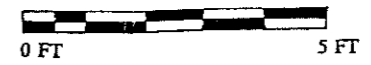
With the removal of the closet and wall, the freestanding brickwork below could be studied more thoroughly. Although no intact bricks survived and no bond pattern was discernable, it is clear that the bricks were laid flat rather than on edge. An elevation taken at the top of these bricks, and compared with the top of the second course of brickwork in the northeast wall, showed that they were level (Ladygo 1993). Measurable fragments revealed that these bricks were thinner than those used in the construction of the house. Their thickness matches the thickness of bricks used in the construction of an historic brick path found in the northwest yard which, based on stratigraphic evidence there, dates to the period 1830-1880 (see below). Beneath the loose brown loam and surrounding the bricks was a thin layer of yellow sand; the possible remains of a mortar bed for the floor. This sand sealed subsoil.

An unexpected, and as yet unexplained, find was located parallel to the west wall of the room. There, a rectangularly shaped feature measuring approximately 1.5' x 5' intruded subsoil to a depth of 0.7'. The feature had straight sides and a flat bottom, and was filled with mixed red and brown loam. Within the fill were deposited a number of domestic objects, including two clay marbles, a handle of a large hollowware vessel decorated with a flow blue decoration, a

FIGURE 4
 EXCAVATED FEATURES NORTH ROOM
 MAIN HOUSE



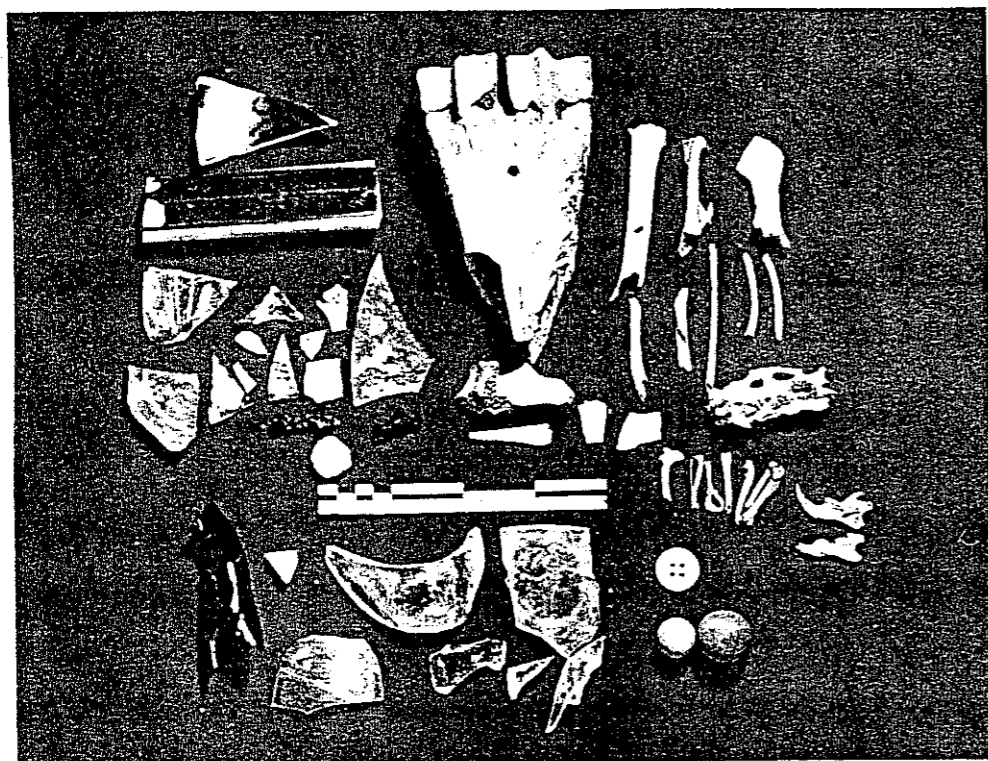
-  PIPE TRENCH
-  BUILDERS TRENCH
-  SAND/MORTAR
-  UNKNOWN FEATURE
-  SUBSOIL
-  BRICK
-  ROCK
-  BRICK FRAGMENTS



flow blue plate base marked "DAVENPORT [18]44", the spout of a black glazed redware teapot, vessel glass, part of a sea shell, mother of pearl buttons, burned peach pits, animal bones, and architectural debris such as lime, mortar, brick and stone fragments, and wrought and cut nails (Figure 5). The original function of this feature is unknown, but based on the recovered artifacts, it was filled in sometime after 1844.

Also sealed by the loose brown loam were sections of builder's trench for the exterior walls of the house and two 1947 pipe trenches. The builder's trench was sampled along the east and west walls, and window glass, Jefferson period mortar and two small bone fragments were recovered. Along the north wall, the trench was disturbed by rodent activity, and contained a straight pin, a wire nail fragment, molded and window glass, and some animal bone, including rodent bones. In each location, the builder's trench was extremely narrow, reaching a maximum width of 0.3'.

A portion of "stratified" flooring was recovered from the fill of one of the 1947 pipe trenches, providing clear evidence of the post-Jefferson history of the room (Figure 6). Several fragments of brick, contemporaneous with the bricks uncovered beneath the partition wall, were sealed by a thin layer of concrete. This concrete predates the Watts floor. Stuck to the bottom of the bricks is a fragment of vessel glass, indicating an occupation surface, of unknown material, existed in the room prior to the laying of the brickwork.



Artifacts in fill of North Room pit, (top left to lower right): flow blue DAVENPORT [18]44 plate base, flow blue handle, molded tumbler glass, window glass, cut nail fragments, mortar, bovine metacarpal, assorted avian and rodent bones, black glazed redware teapot spout, sea shell fragment, stemware and tumbler fragments, mother-of-pearl button, clay marbles.

FIGURE 5

Combining the various lines of evidence, it is possible to loosely reconstruct the flooring history of this room. The original surface is unknown, although it should be possible, through ongoing paint analysis, to settle the question of whether or not there was any floor here during the Jefferson period. Sometime after 1844, a narrow pit located parallel to the west wall of the room was filled in. While the fill of the pit contained architectural debris, it did not contain large quantities of burned material or charcoal in the soil, suggesting that it was not filled with debris from the 1845 fire. Sometime after the pit was filled, a brick floor was laid. Because it is contemporaneous with the brick path found in the northwest yard, it must have been installed before 1880, the terminus-post-quem date for the gravel layer sealing that path. Late in the nineteenth or early in the twentieth century, the brick floor was sealed beneath a thin layer of concrete. When the Watts concrete floor was installed, this earlier floor was removed, except where it was protected beneath the partition wall and the walls of the closet.

The South Room

Perhaps the most dramatic structural evidence found in the basement appeared in the south room. There, beneath the thin layer of loose brown loam and thin scattered patches of lime, were observed the remains of floor joists burned into subsoil. The joists appeared as dark concentrations of



"Stratified" brick flooring fragment, with oldest surface containing vessel glass on the top, and latest surface, coated with concrete, on the bottom.

FIGURE 6

charcoal surrounded by clay burned to the consistency of brick. The most intact burn scars were located in the center of the room, and ran from the north wall to within 0.3' of the south wall (Figures 7 and 8). Aligned on two foot centers, the joist scars spanned the room, becoming more disjointed and disturbed in front of the east and west hearths.

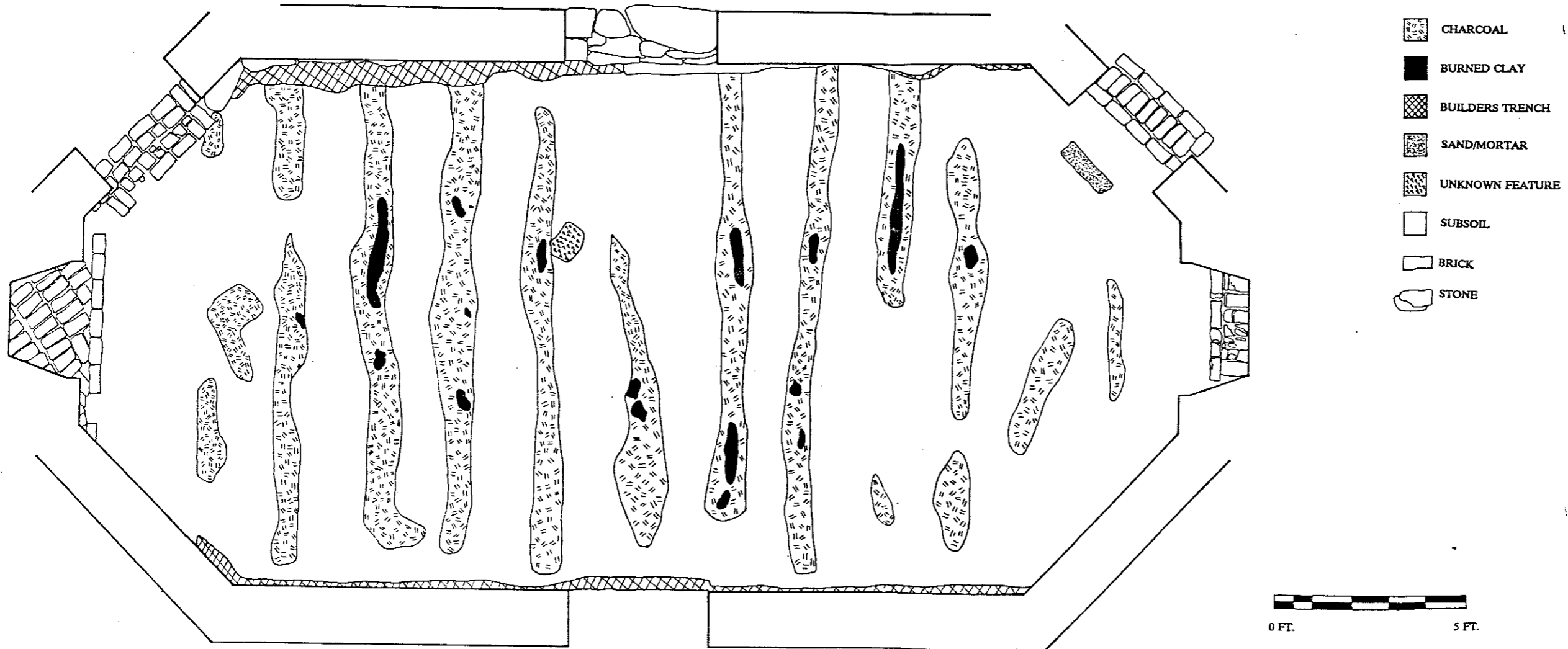
These features present vivid evidence of the floor as it existed, and was destroyed, in the fire of 1845. Apparently the intensity and longevity of the blaze produced sufficient heat to literally burn the floor into subsoil.²

The floor remains observed in the south room, while important in understanding the history of the basement, do not prove that a wooden floor existed in the room during the early nineteenth century. An absence of bricks, brick fragments or a sand mortar layer contradicts the evidence of brick dust in the crevices of the central stone foundation, suggesting that the room was never floored with brick. It is possible that the 1845 floor was a descendant of an earlier wooden floor, or that no flooring material was laid in the room during Jefferson's lifetime. Documentary evidence is vague on this

² Although no intact wood survived, Mr. Wayne Saunders, Lynchburg fire marshall, hypothesized that chestnut was used as the flooring material. He suggested an experimental fire to test the results of burning chestnut and other likely woods. Such an experiment could provide information concerning the length of time and the degree of heat needed to produce the results we observed archaeologically. This, in turn, could be compared with the documentary evidence which presents a reasonably clear timeframe from outset of fire to onset of clean-up. To date, this experiment has not been undertaken.

FIGURE 7
EXCAVATED FEATURES SOUTH ROOM
MAIN HOUSE

NORTH



0 FT. 5 FT.

point. In 1824, Elizabeth Eppes made reference to the "damp cellars & wet offices" (M.E.R. Eppes to Virginia Randolph, August 18, 1824, UNC-Trist), a reference which suggests that a wooden floor present in the basement at that date would not survive to be burned in 1846⁵. Conversely, in 1856 Jefferson's granddaughter Ellen Coolidge recalled that "the lower or basement story was still unfinished when the property passed to my cousin Francis Eppes" (Ellen Coolidge to Henry Randall, February 18, 1856, ViU). Exactly what Ellen meant by "unfinished" is not clear.³

In addition to the burn scars, several other minor features were explored in the south room. Archaeologists excavated numerous rodent disturbances adjacent to the west hearth and scattered across the room. The builder's trench for the stone-walled wine cellar, approximately 0.6' wide, was sampled and found to have been disturbed by rodent activity in the twentieth century. The narrow builder's trench associated with the south wall of the house was also sampled and found to have been disturbed, although the disturbance here dated to the nineteenth century, and was marked by the presence of flow blue earthenware in the fill.

The East Room

Archaeologists excavated twelve units around the

³. For a more complete survey of the documentation of the basement rooms, see Thomas Jefferson's Poplar Forest, Historic Structure Report, Main House, p.113-116.



Burn scars in the south basement room floor. Scars appear as dark lines with lighter centers.

perimeter of the east room in 1991 and two larger units encompassing the center of the room in 1992. Beneath the concrete and gravel a layer of loose brown loam extended across the room. This layer was significantly thicker in the south half than in the north half of the room, and contained numerous artifacts, including wire and cut nails, window glass, a variety of earthenware and porcelain fragments, marbles, straight pins and small animal bones. Many of these materials apparently accumulated under the pre-Watts floor, while others, especially nails, may have been deposited when that flooring was removed.

The loose brown loam contained within it patches of sand or decomposed mortar, but these were significantly smaller than the sand deposits interpreted as a bed for a brick floor in the north room. Beneath the loose brown loam was a thin layer of lime which extended across the room. It is probable that the lime was intentionally spread beneath the floor to inhibit insect and rodent damage.

Like the south room, the east room contained the scars of burned floor joists spaced on two foot centers. No joists were discovered in line with the doorway to the east stair pavilion. While the center of the room was extensively disturbed by pipe trenches, enough undisturbed soil remained intact to have preserved joist scars had they been formed during the fire. This lack of evidence may point to an internal partition wall which, prior to 1845, divided the east

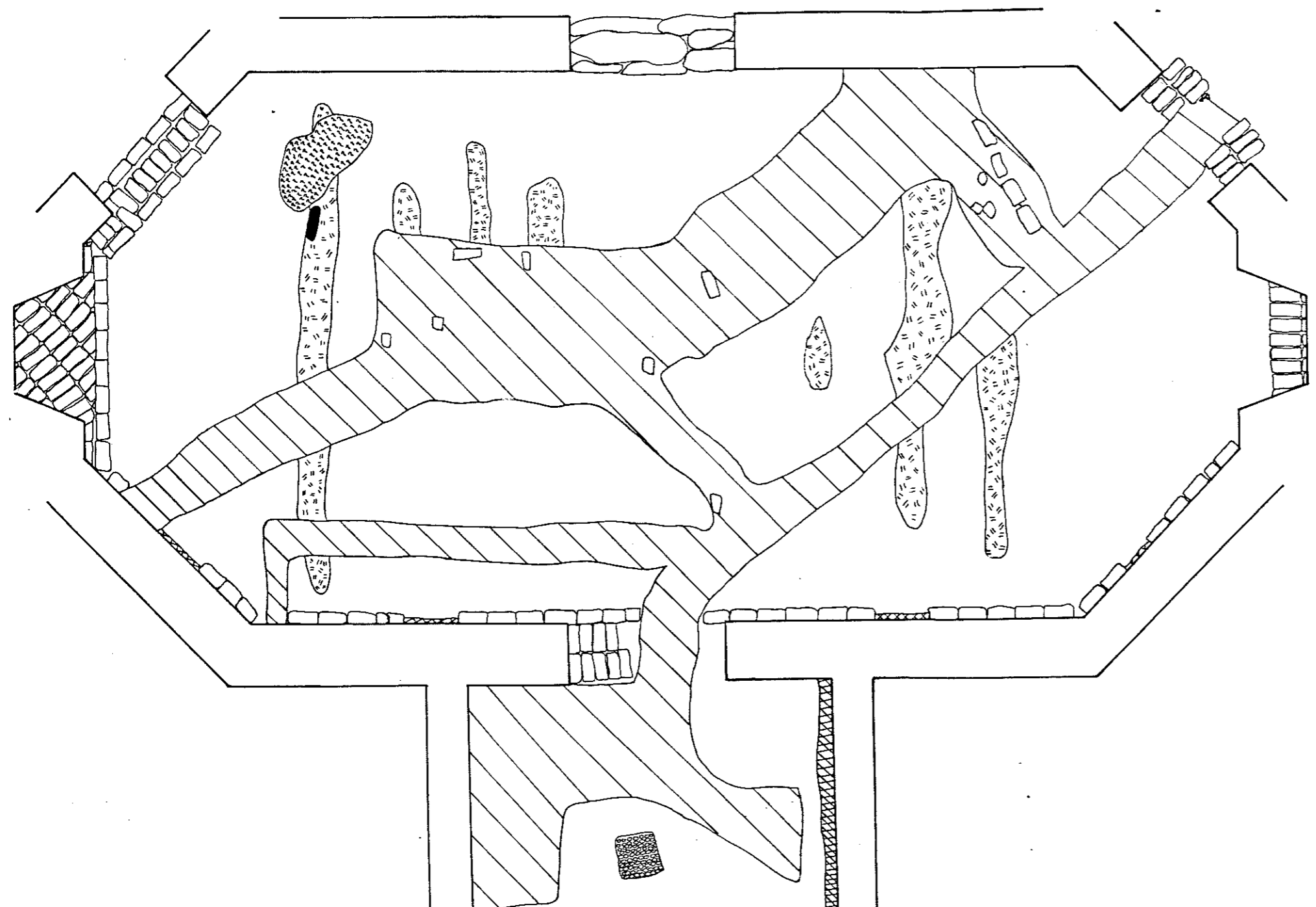
room in half (Figure 9).










Beginning east of the south hearth and running along the southeast and east walls of the room stretched a line of bricks. The bricks measured 8" x 3 9/16" x 2 13/16" in dimension. Archaeologists removed four of them, and discovered that they were not mortared to each other or to the face of the wall. Mortar traces on the surfaces of several of the bricks, however, suggested that originally there was at least one additional brick course associated with this feature. Burn stains on the east wall stop at the top of this missing course of brick, indicating that in 1845, this feature existed to a height of two courses above modern subsoil.

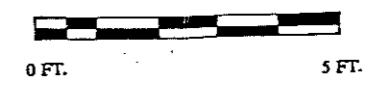
North of the east stair pavilion, the bricks sat on top of a shallow trench, while south of the pavilion, they rested on a very thin layer of soil sealing subsoil. No artifacts were found in this layer or in the trench, yet mortar taken from the tops of the bricks matches that found in Jefferson period masonry throughout the house.

Because of the incomplete nature of the evidence, it is unclear whether these bricks represent a Jeffersonian floor, or some other early feature. There are particles of brick dust at approximate floor level in the crevices of the stone wine cellar foundation wall in each of the four basement rooms. Here, these particles, in combination with the intact brickwork against the east wall, suggest that the room was floored with brick. Yet it is obvious from the burn scars

FIGURE 9
 EXCAVATED FEATURES EAST ROOM
 MAIN HOUSE



-  CHARCOAL
-  BURNED CLAY
-  BUILDERS TRENCH
-  PIPE TRENCH
-  UNKNOWN FEATURE
-  SCAFFOLD HOLE
-  SUBSOIL
-  BRICK
-  STONE



KS 1993

that in 1845, a wooden floor was present here. Does the brickwork and brick dust indicate a pre-fire brick floor, or are they independent lines of evidence, with the "ledge" fulfilling a separate function, and the brick dust resulting from a post-fire brick floor that was removed by Watts in much the same way that the floor in the north room was removed? We do not have sufficient archaeological evidence to answer this question.

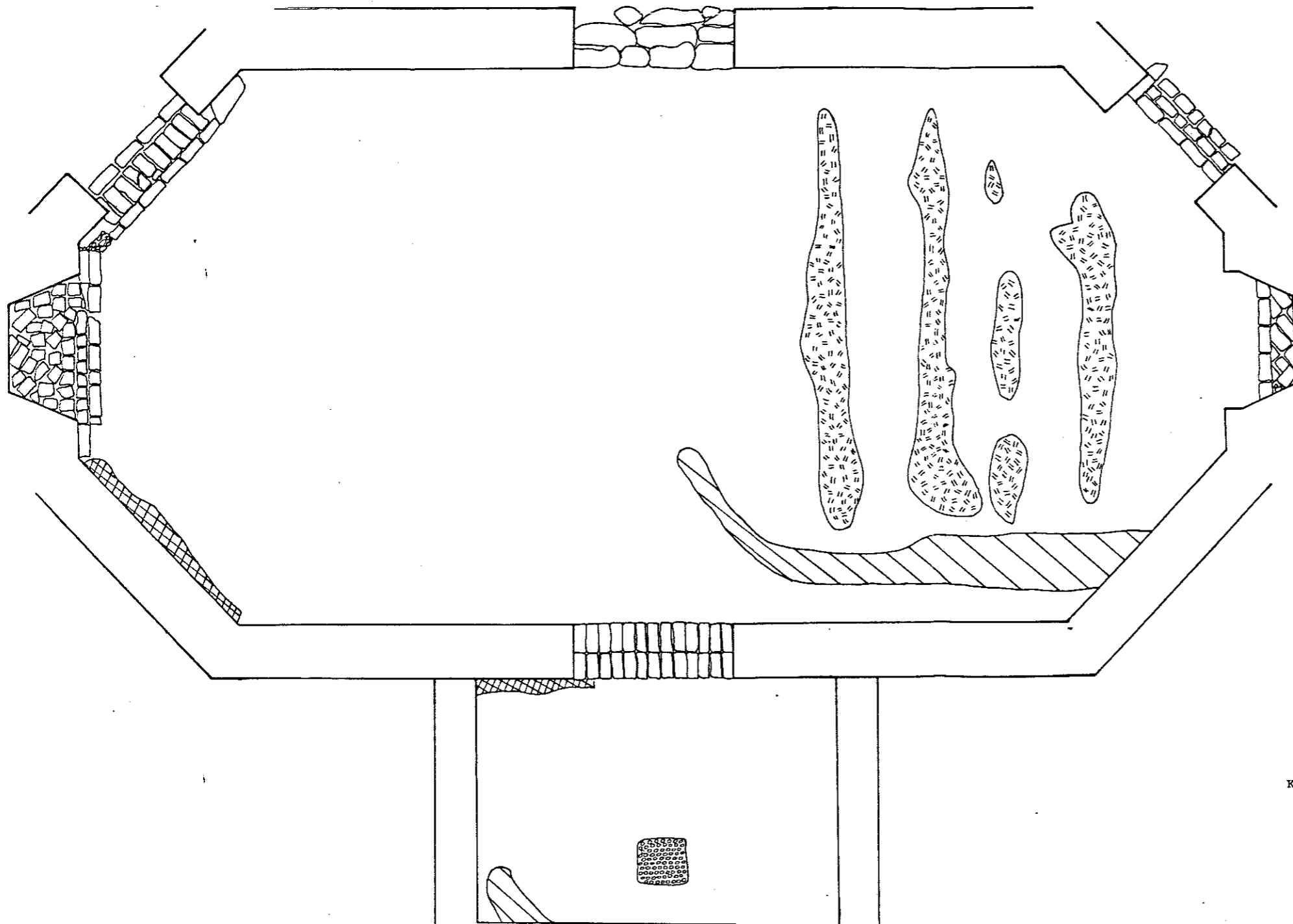
The West Room








Archaeologists excavated five units in the west room. Each contained the layer of loose brown loam dating to the late nineteenth and early twentieth centuries found throughout the basement. Numerous rodent burrows and pipe trenches disturbed the soil around the north hearth and the southwest corner of the room. Still, clear evidence of four burn scars was uncovered in the south half of the room (Figure 10). No burn scars were observed in the north half, suggesting the possibility that the room was partitioned and floored with two different materials at the time of the 1845 fire.

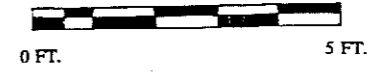
The East and West Stair Pavilions

The east stair pavilion was divided into three units and excavated in its entirety. Like the basement rooms, each pavilion had been floored with concrete in the 1940s, and heavily disturbed by pipe trenches. It was hoped that because

FIGURE 10
EXCAVATED FEATURES WEST ROOM
MAIN HOUSE



-  CHARCOAL
-  PIPE TRENCH
-  BUILDERS TRENCH
-  SCAFFOLD HOLE
-  SUBSOIL
-  BRICK
-  STONE



KS 1993

the pavilions had been added to the house after the exterior walls were erected, they would contain within them preserved sections of the original builder's trench which had escaped exterior waterproofing. While a narrow section of builder's trench was found against the west wall of the east pavilion, part of it had been disturbed in the late nineteenth century (Figure 9).

Preserved within the bonding of the north and east walls of the east pavilion are the remains of an original brick floor. The extant brickwork has been broken off, but enough remains to establish the dimensions of individual bricks as 3 1/2" wide and 2 9/16" thick. Like the floor in the north room, the stair pavilion flooring was composed of a double course of bricks laid on edge.

A 1' square post hole was excavated in the center of the pavilion. Filled with brown clay loam, the hole contained Jefferson period mortar, waster bricks and field stones, and reached a depth of 1.0' below the top of subsoil. It has been interpreted as a scaffold hole for the construction of the pavilion.

A similar feature was located in the center of the west stair pavilion. Although more irregularly shaped, the feature measured roughly 1' square, and intruded subsoil to a depth of 1.0'. Filled with loose brown loam, it also contained brick fragments and chunks of Jefferson period mortar. It too has been interpreted as a scaffold hole.

During architectural investigations of the west pavilion, the remains of a privy arch were uncovered in the north wall. A small, shallow deposit of brown silty clay was found intruding subsoil beneath the arch, but no evidence remains of the dimensions of the seat. No evidence of flooring, either wooden or brick, was found here.

Conclusions

Evidence for flooring in the basement varied from room to room. Convincing evidence of brick floors was found for the north room and east stair pavilion, although it is unclear in the case of the former whether such a floor existed in the Jefferson period. An extant brick feature in the east room combined with burn scars clustered in the north and south of the room, clouding a clear chronology of flooring materials there. The southern half of the west room and the entire south room yielded conclusive evidence of wooden floors present at the time of the 1845 fire. How these rooms were floored during the Jefferson period is not known.

More elusive than flooring materials was any artifactual evidence to indicate how Jefferson had used these rooms, or if, indeed, he had ever finished them. An early jelly glass was found beneath the north fireplace in the east room. Beyond this single object, nearly all of the artifacts recovered from a thin layer sealing subsoil, from builder's trenches, from pipe trenches and from rodent burrows postdate

1840, and most can be directly attributable to either material that sifted down through the floorboards over time, or architectural debris deposited when the Hutter floors were replaced by concrete in the 1940s. An important exception to this pattern of random deposition is the the fill of the rectangular pit in the north room. Its original function is unknown, but its fill represents an intentional activity.

Finally, excavations in each basement room and in the pavilions revealed that the house sat directly on subsoil within extremely narrow builder's trenches. While prior testing outside of the foundation discovered that builder's trenches there had been destroyed by the installation of modern drainage, it is clear from interior evidence within the pavilions that they had never been wide or deep.

V. THE SOUTH YARD

The South Portico

Prior to the onset of construction work in 1993⁴, staff archaeologists completed excavations beneath the south portico of the house. A modern brick pavement, resting on a bed of poured concrete, sealed the entire area. Initially, a 1' x 1' area of pavement was removed along the western end of the portico and the underlying soil was excavated in an attempt to

⁴ Construction work carried out during the summer and fall of 1993 included installing drains and waterproofing materials against the foundations of the house, pouring concrete underpinnings beneath it, and repairing the south portico column supports.

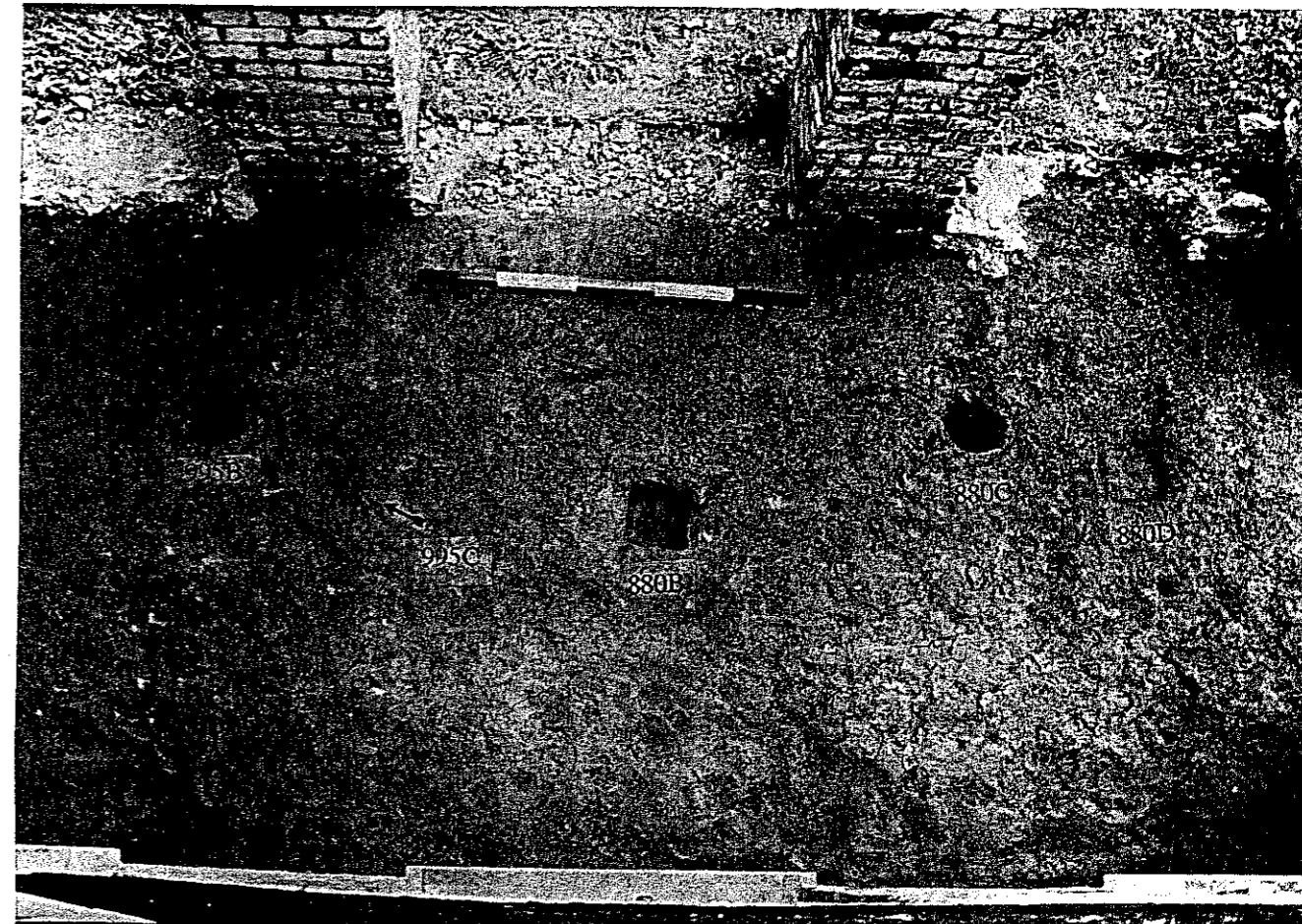
locate intact Jefferson period strata. Although no historic layers were discovered, the entire pavement was removed for examination prior to construction. The area was divided into two excavation units, ER880 and ER995, each roughly 8.5' north-south by 9.5' east-west.

A thin layer of mixed sand and concrete lay beneath the concrete bed in which the pavement had been laid. Beneath this layer was a lens of loose sandy soil containing mortar and brick fragments deposited during repairs to the south face of the house, most probably undertaken by the Watts in the late 1940s or early 1950s.

These modern deposits sealed five historic features, ER880B, 880C, 880D, 995B and 995C, and subsoil⁵ (Figure 11). ER880B was filled with loose red brown loam, ER880C contained brown loam with small amounts of charcoal, ER880D, 995B and 995C were filled with red brown loam, some charcoal, and the remains of decayed mortar (Table 1).

All of these features appear to be the subsurface remains of scaffolding. Historically, they are most likely to have been associated with either the initial construction of the

⁵ Two additional holes were uncovered and disturbed by workmen digging around the southern edge of the portico. One hole lay southwest of the southwest pier of the portico, and was recorded by the archaeological monitor. What remained of the feature after its initial disturbance indicated that the hole was approximately 0.9' north-south and 1.3' east-west. No artifacts were found in its fill, but a mix of nineteenth and twentieth century artifacts were recovered in the surrounding soil. The monitor believed this to have been a modern hole. The other sat just east of the southeast pier. It was badly disturbed, and was not recorded.



Scaffold holes beneath the south portico. ER 995C is indicated by arrow.

FIGURE 11

TABLE 1
FEATURES IN SOUTH PORTICO

| CONTEXT | DEPTH | ARTIFACTS | DIMENSIONS | COMMENTS |
|---------|-------|--|--------------|----------|
| ER880B | 0.5' | brick, stone | 0.7' x 0.9' | posthole |
| ER880C | 0.6' | brick, schist, mortar, window glass | 0.6' x 0.7' | posthole |
| ER880D | 0.25' | window glass, unident. nails | 0.8' x 0.9' | posthole |
| ER995B | 0.65' | window glass, wrought and unident. nails | 0.9' x 0.6' | posthole |
| ER995C | 0.2' | brick, mortar | 0.9' x 0.85' | posthole |

TABLE 2
ABSOLUTE ELEVATIONS OF FEATURES
(IN FEET AND TENTHS OF FEET)

| CONTEXT | ABSOLUTE ELEVATION | DISTANCE FROM S. WALL TO CENTER OF FEATURE |
|---------|--------------------|--|
| ER880B | 98.3 | 4.5' |
| ER88C | 97.7 | 5.5' |
| ER880D | 98.6 | 5.1' |
| ER995B | 97.6 | 5.5' |
| ER995C | 98.6 | 4.0' |

house, or with repairs made to the portico and south facade of the building after the 1845 fire. Due to the partial removal of overlying soils sometime in the twentieth century, and the paucity of artifacts in the features themselves, it is difficult to date them with certainty. However, all artifacts that were identifiable can be attributed to the Jefferson period.

Based on absolute elevations for the bottom of each hole (Table 2) and on size, the features can be divided into two groups. Features 880B, 880D and 995C are approximately the same size and depth, and are centered between 4' and 5' south of the south face of the house. Features 880C and 995B are smaller, deeper holes lying slightly further south than the others. Whether these features were contemporaneous is impossible to say based on the surviving evidence here.

Two historic sources provide some information about the construction and placement of scaffolding by brickmasons. The 1703 edition of Joseph Moxon's Mechanick Exercises or the Doctrine of Handy-Works, includes a brief listing of equipment, or "utensils" as he terms them, needed to perform masonry work. Among these, Moxon lists

2. Fir Poles, of several lengths for Standards and Ledgers for Scaffolding.

3. Putlogs, which are pieces of Timber, or short Poles, about 7 Foot long, which lies from the Leggers into their Brickwork, to bear the boards they stand on to Work, and to lay Bricks and Morter upon.

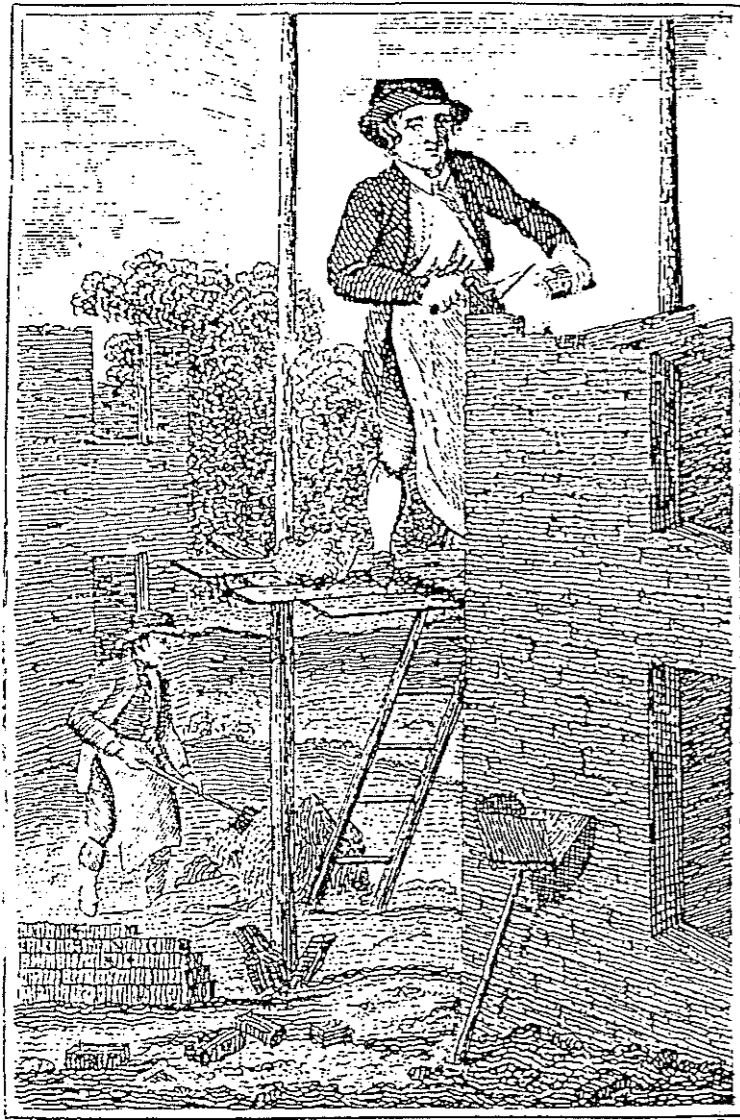
4. Fir Boards, about 10 Foot long, and any Breadth, but commonly about a Foot broad, because for the most part, four

of them in breadth, makes the breadth of the Scaffold: Which boards ought to be one Inch and or two Inches in thickness, altho' commonly they make use of some, which are not above one Inch thick, which are sometimes subject to break, especially when the Putlogs lye far asunder from one another (Moxon 1979:251).

Moxon's directions to use ten foot long boards suggest that the posts on which they were supported had to be spaced no further apart than about eight feet, leaving about a one foot overlap on the each end. In constructing a portico, the scaffold poles may have been more closely placed in order to support a system of platforms which would allow the mason to work in a circular fashion around the columns.

Additional information on the construction and placement of scaffolding can be found in the reprint of an 1806 edition of Little Book of Early American Crafts and Trades (Stockham 1976:43). A copperplate engraving of a mason at work accompanies the text. Interestingly, the engraving shows a scaffold hole "in action": the hole contains a post braced by brickbats (Figure 12).

Correspondence at Poplar Forest between the mason, Hugh Chisolm, and Jefferson suggests that our scaffolding may have been in place sometime between the late spring of 1807 and the late summer of 1808. In June of 1807, Chisolm updated Jefferson on his progress. "The walls are all leavel except the squar room the stone masons is not come to do them yet tho they say that they will be hear in a few days. The south piazer is up to the wartertable the starway I have not done



A Bricklayer? ^{W.E. 10.}

"A Bricklayer" from Little Book of Early American Crafts & Trades.

FIGURE 12

any thing to ..." (Chisolm to Jefferson, June 1, 1807, MHi). The following July he burned bricks for the bases and capitals of the columns, and less than two months later, he reported that the columns for the south portico were finished (Chisolm to Jefferson, July 22, 1808, MHi; Chisolm to Jefferson, September 4, 1808, MHi).

An additional discovery was made during excavations of the portico. Approximately 0.6' below the concrete line for the Watts era paving, a number of broken bricks, labelled 995D, were found extending out from the base of the northeast pier (Figure 13). Initially it was believed that these bricks represented the remains of an original paving. There is no historic evidence for flooring in this area during the Jefferson era; indeed the first surviving evidence for flooring appears in early twentieth century photos. These show some sort of hardpacked surface beneath the portico, although none are sufficiently clear to allow for a close assessment of the flooring material (Figure 14).

A closer look at the elevation of the top of the broken bricks proves, however, that they cannot represent flooring. The top of the brickwork is less than a brick's width higher than the subsoil surface adjoining features 880B and 995C⁶. It is therefore impossible that these bricks could represent a reasonably level floor surface. Instead, they may be the

⁶ The difference between the top of the brickwork and the top of subsoil adjacent to ER880B is 0.01' (they are level), while the difference for ER995C is 0.12'.



Trowel points to broken brick course at base of pier in South Portico.

FIGURE 13

remains of a brick footer for the pier that originally sat below grade. Modern scraping removed the overlying soil and obliterated the remains of a shallow builder's trench, while at the same time it cut off the tops of the scaffold holes. This resulted in the features all appearing at the same depth below the datum point, although initially their stratigraphic relationship was different.

The French Drain

During the excavations of the Wing of Offices, completed in the fall of 1990, archaeologists uncovered a twenty five foot section of french drain. The drain ran east-west across the face of the wing, just south of the stone foundation for the wing's arcaded front. Utility trenches had obliterated its eastern extension. At a distance of some twenty feet from the east face of the house, the drain began to veer to the south, suggesting a path just inside the eastern edge of the bowling green, at the base of the eastern grassy berm. In the summer of 1992, excavations continued to trace its route. Two questions were posed of these later excavations; first, did the drain line branch in a "Y" formation back toward the east stair pavilion to drain the roof of the main house, and second, what was its extent?

A total of six excavation units, ERS 731, 732, 733, 734, 741 and 762 were excavated to answer these questions. As work proceeded, it became evident that much of the overlying



Early twentieth century view of south facade of Poplar Forest house showing hardpacked floor beneath the South Portico.

FIGURE 14

stratigraphy had been disturbed in the twentieth century. In places, the top of the drain itself was lost to modern activity while in others, narrow sections of the drain had been cut through by twentieth century utility trenches. Nevertheless, most of the drain remained intact, containing within its fill a mixture of organic soil and artifacts dating to the Jefferson period.

In each of the excavated units in which the drain appeared, topsoil and a very modern (post 1970) layer sealed a layer of mixed red brown clay with deposition dating from the mid-nineteenth century through 1900. This layer sealed a number of features, and was, in turn, intruded by a pipe trench and an extensive disturbance in the southernmost unit, ER732, associated with the installation of phone lines.

Deposits associated with the drain itself were sealed by the mixed red brown clay. In ERs 732 and 733, thin deposits of mid-nineteenth century material were mixed with the upper stones of the drain. In the northernmost unit, ER734, less utility disturbance had occurred, and the drain was consistently filled with materials dating to the first quarter of the nineteenth century.

The drain appears to have been constructed by digging a shallow trench and filling the center with cobbles ranging in size from approximately 0.4' - 0.8' (Figure 15). This was accomplished with evident attention to detail. Stones were neatly arranged within the trench, and additional stones were

EXCAVATED FEATURES SOUTH YARD
FRENCH DRAIN

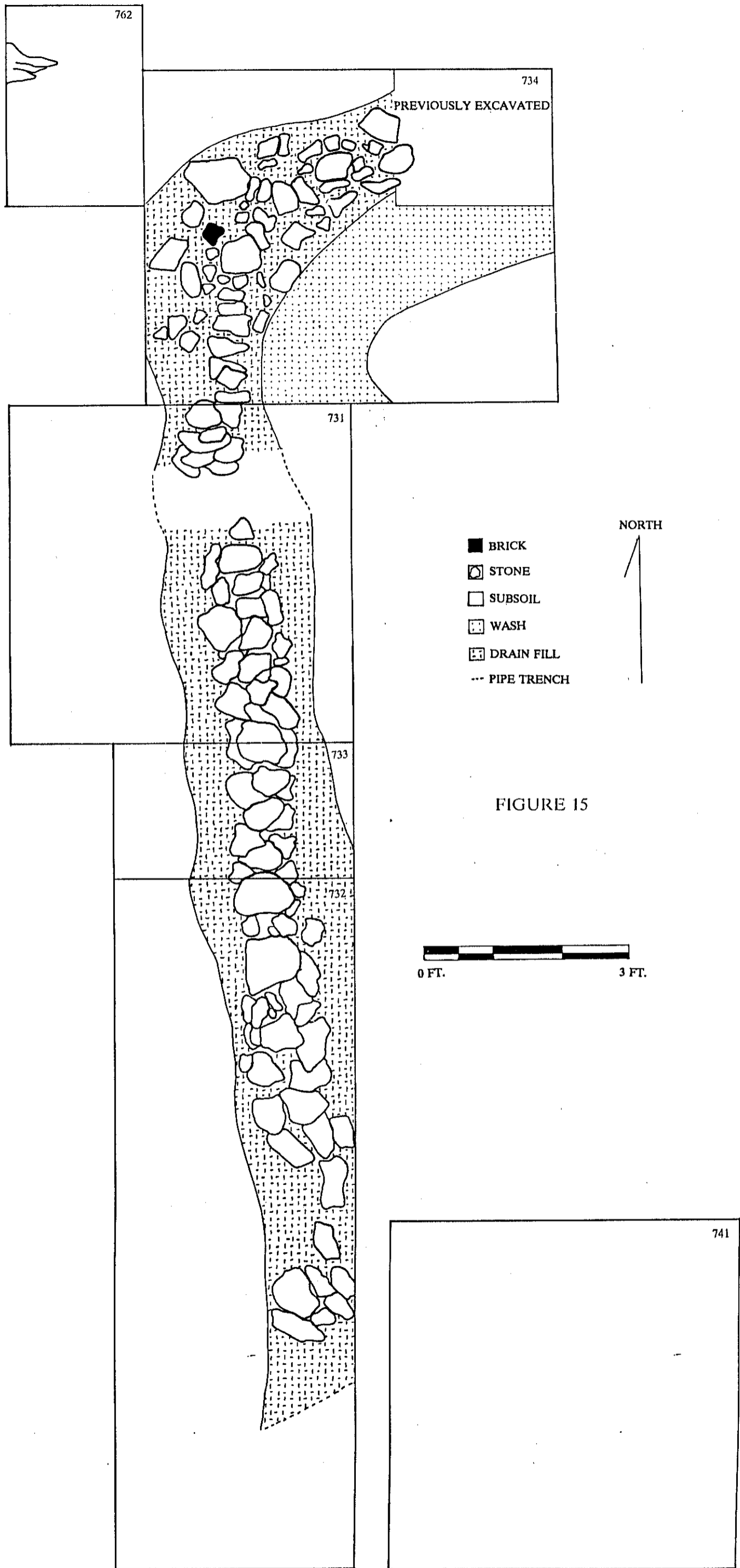
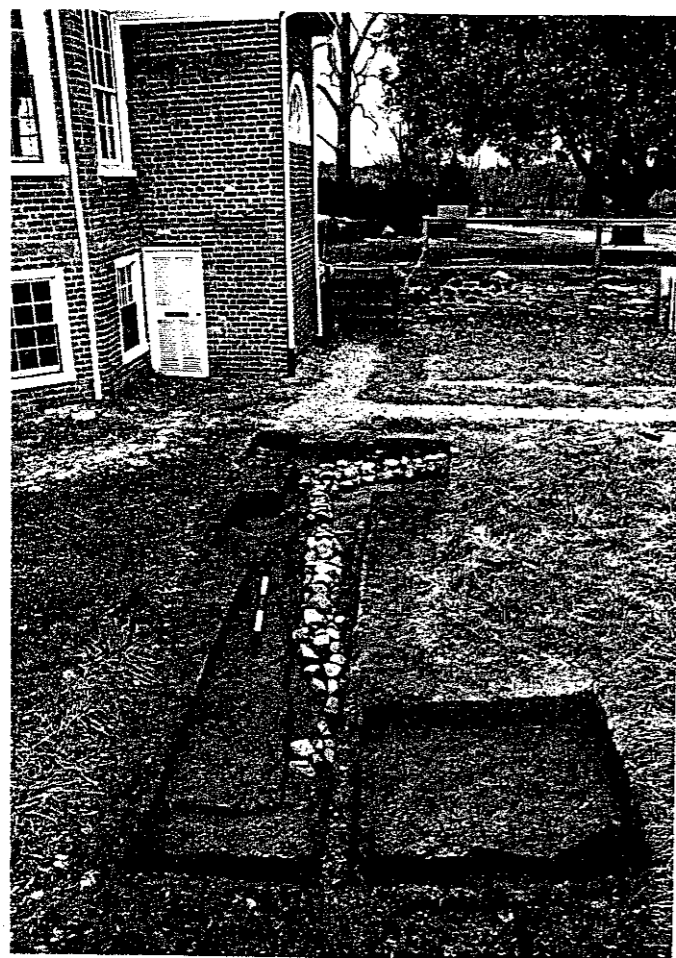


FIGURE 15

laid lengthwise on top to form a cap. Rich organic soil, containing a range of domestic objects, filled the voids between the stones, and in some areas, sealed the capstones. Artifacts recovered within the drain fill have been used to confirm the date of its construction, most probably 1814-1815 when the wing of offices was completed.

The drain showed no evidence of ever having connected with a line coming from the main house (Figure 16). Currently, there is no archaeological evidence of how the roof was drained. Interestingly, the french drain ended abruptly in a modern utility disturbance. Although a large area beyond the utility line was excavated, no evidence that the drain had ever continued in this direction was discovered. Similarly, no evidence of a cistern or similar receptacle for the waste water exists. Apparently, the water was conducted a reasonable distance from the wing, and discharged into the south lawn.

Although brick drains have been found archaeologically in a late eighteenth century context at Mt. Vernon and an early nineteenth century context at the Octagon House in Washington, D.C., I am unaware of documentation for french drains being used for roof drainage during the early nineteenth century. With the exception of a deep stone lined drainage channel begun outside of Jefferson's bedroom at Monticello, and probably filled in the late eighteenth century, no visible evidence of drainage was uncovered during excavations of the



Excavated french drain with the house and the outline of the Wing of Offices marked in gravel in the background.

FIGURE 16

perimeter of that house undertaken in 1990-1991. Written references to drains restrict their commentary on french drains to discussions of draining agricultural fields and gardens (Spurrier 1793:75, Fessenden 1834:99-101). Though no evidence exists to suggest that the south lawn drain was used for the main house, it is interesting that Jefferson should have employed such technology in draining the roof of his office wing.

VI. THE WEST YARD

Only one unit was excavated in the west yard in association with the modern drainage phase of the 1993 restoration project. ER996 measured 5.5' x 10' and ran parallel to the west wall of the west stair pavilion. Beneath topsoil and a modern trench containing a phone cable was a circular stain running into the southwest corner of the unit. This feature was filled with loose brown loam, charcoal and rocks and was 0.71' deep. Handpainted porcelain, ironstone, cut nails, window and vessel glass and brick fragments were recovered from the feature, which has been interpreted as a planting stain.

Intruded by the planting feature was a layer of brown silty loam. Filled with a range of domestic artifacts, the layer dated to the late nineteenth century, and sealed a thin layer of reddish brown sandy loam. This contained numerous domestic artifacts dating to the mid-nineteenth century.

Below it appeared a section of an earlier french drain.

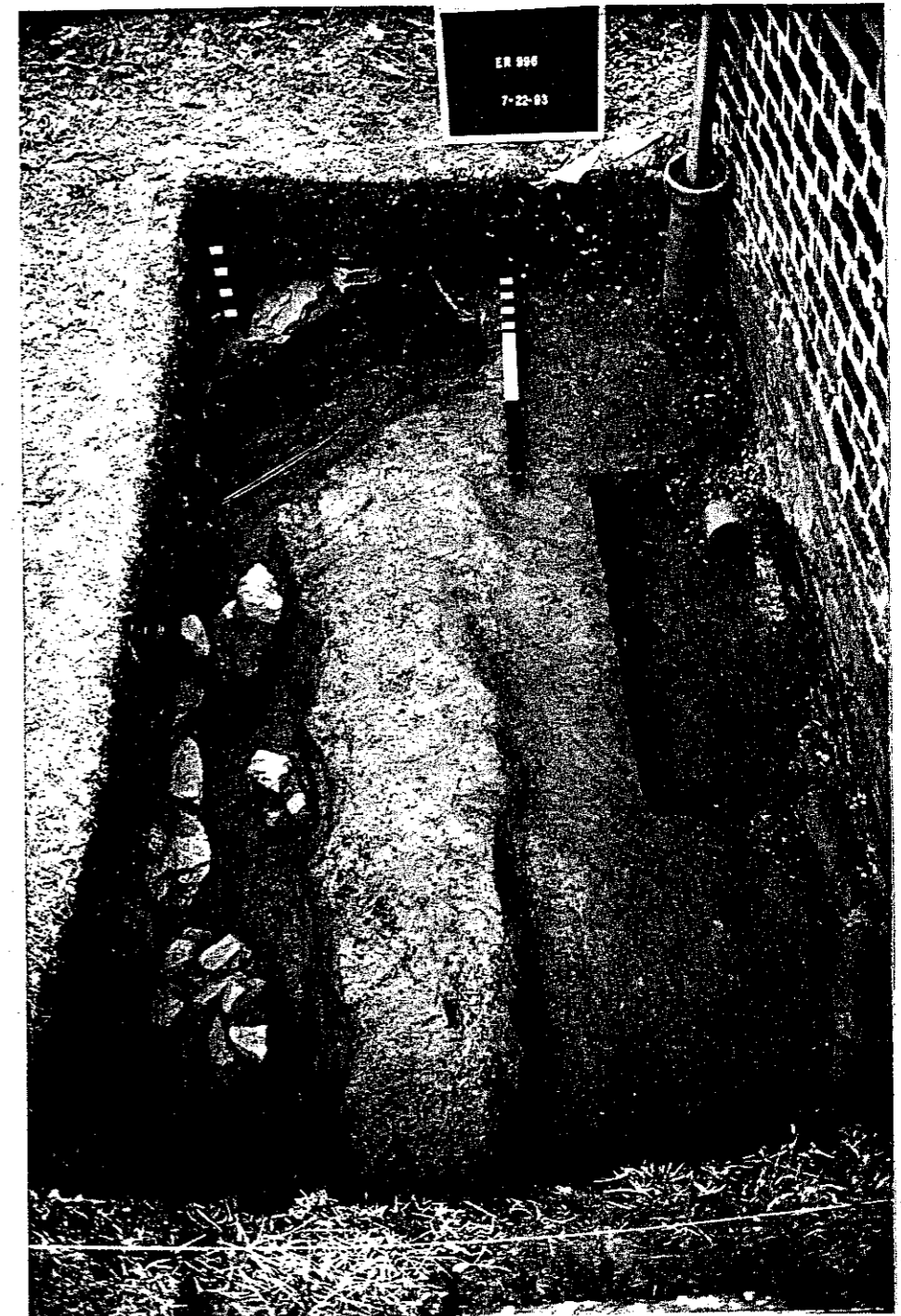
The drain, designated ER996F and G, extended north-south across the entire unit. It consisted of large stones, laid flat across the top. Four molded bricks, designed for use in constructing the brick columns of the north and south porticos, were incorporated into the fabric of the drain. While its eastern edge was exposed, the feature ran into the west wall of the unit, with approximately 2' of its total width exposed (Figure 17).

Above and between the stones was a deposit of reddish brown silty loam with charcoal. In the soil matrix, stoneware, wrought nails, a cut nail, green bottle glass, porcelain and window glass were recovered, as well as a few pieces of brick. The presence of a cut nail in the fill at the level of the top of the stones brings the date of the feature into question. Obviously, further excavations are needed to define its maximum width, trace its course, and establish a firm date of construction.

VII. THE NORTHWEST YARD

The Clump

Excavations at the northwest corner of the house combined landscape research with construction mitigation. The majority of units and features discussed below fell outside of the scope of the 1993 drainage work, but were finished as part of the pre-construction archaeology.



Excavated section of french drain west of west stair pavilion.

FIGURE 17

In an 1812 memorandum, Jefferson directed that, among other improvements to the grounds at Poplar Forest, overseer Jeremiah Goodman should plant a clump of trees "at each corner of the house". Like other plantings carried out that fall, the clumps disappeared from the landscape, leaving behind questions concerning their internal layout, size, and orientation relative to the house and existing carriage turnaround, and their longevity as landscape features.

Clumps, composed either of single species or of mixtures of trees, were important visual elements of late eighteenth and early nineteenth century pleasure grounds (Whately 1982:53-60). Landscape designers used the former to interrupt vistas and to soften the harsh line between clearing and forest. Mixed clumps, conversely, were intended to punctuate the landscape with plantings that were at once novel, varied and pleasing to the eye.

When instructing readers on the best method for planting mixed clumps, nurseryman Bernard MacMahon alluded to the common practice of separating deciduous and evergreen trees, although he allowed that the two might sometimes appear together, "to cause the greater diversity", and to "appear ornamental and lively in winter, when the deciduous plants are destitute of leaves" (MacMahon 1806:62). He recommended arranging the trees with the tallest located in either the background or the center, and others placed "according to their gradation of height". Individual plants, he advised,

should be placed within the clump "at such proportionable distances and dispositions, according to their various growths, as each may have full scope to spread its head; and so as the prospect of one, may be no interruption or impediment to the growth and appearance of another" (MacMahon 1806:57, 62-63), (Figure 18).

Jefferson's familiarity with clumps probably began in European gardens. Certainly he appreciated their effect at Esher Place, Surrey, where he remarked "Clumps of trees, the clumps on each hand balanced finely - a most lovely mixture of concave and convex" (Betts 1944:112). His own experimentation with clumps at Monticello began in 1807, apparently with only limited success. In March of that year, he purchased thirty six trees and shrubs from Thomas Main's nursery in Georgetown. A month later, twenty eight of these plants - including paper mulberries, robinia hispida (red or prickly locust), mountain ash, tacamahac poplars, zanthoxylon (prickly ash), choke cherries and purple beeches - formed the core plantings for four clumps set the angles of the house. To these, he added horse chestnuts and a redbud from his own stock at Monticello (Betts 1944:334,342).

In April, Jefferson noted that two paper mulberries, three horse chestnuts, one tacamahac poplar, one robinia hispida and one choke cherry were placed in the northeast and southeast clumps. Additionally, the redbud was planted in the northeast, for a total of nine trees, while in the southeast,



Ranston, in Dorsetshire, the Seat of Tho. Ryves Esq.
Published as the second time April 1779 by W. H. Sturt, Sculp. Lond. &c.

Clump at Ranston, the seat of Thomas Ryves, from The Seats of the Nobility and Gentry, In a Collection of the most interesting and Picturesque Views.

FIGURE 18

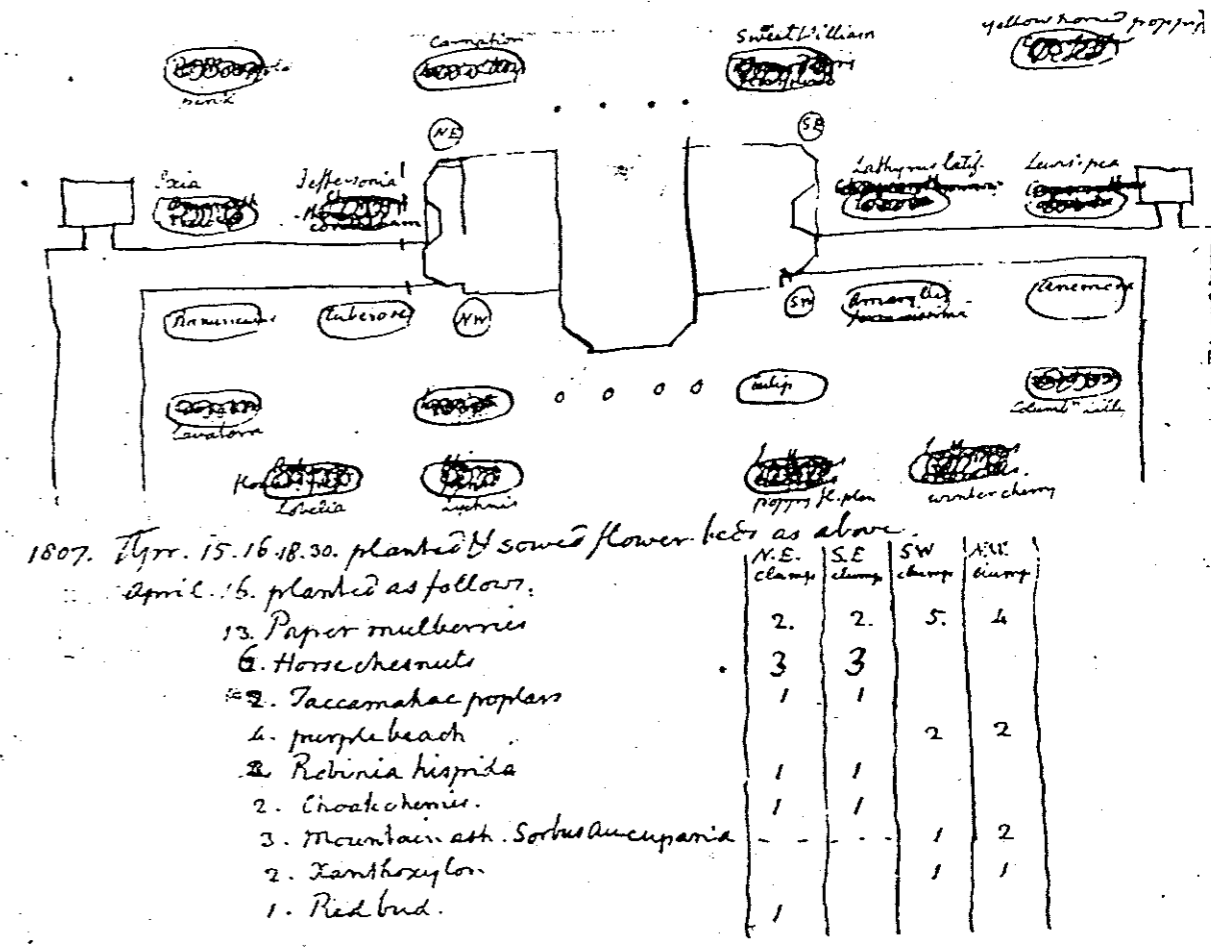
eight trees were set out. Five paper mulberries, two purple beeches, one mountain ash, and one zanthoxylon were planted in the southwest clump, while, in the northwest, Jefferson omitted a paper mulberry and added a mountain ash and a prickly ash⁷. Thus, the two clumps numbered nine and ten trees respectively (Figure 19).

A planting memorandum addressed to Monticello overseer Edmund Bacon informs us of the state of the clumps in November of that year. Of the original group of thirty six trees planted, eight had died. Replacements were purchased from Maine (Betts 1944:353). Jefferson ordered that, in addition to replacing the dead trees, three plants be added to the clumps on the west side of the house, bringing the total number of trees in each to eleven.

How long the clumps persisted in the Monticello landscape is unknown. However, by 1825 they were either completely gone, or were perhaps represented by only a few remnant trees. In this year, two watercolor renderings were done of the west front, one painted by Jane Bradick and the other by Jefferson Vail. Neither shows evidence of a clump fitting the description of Jefferson's 1807 planting plan.

The same month that the trees for the Monticello clumps were ordered from Georgetown, Nicholas King recorded a "list

7. The reference to this second prickly ash is found in a subsequent communication with Edmund Bacon, in which he states that "In the S.W. angle of the house there was planted one of these trees last spring, and in the N.W. angle 2 others...(Pierson in Betts 1943:355)



Oval planting beds and listing of trees for clumps at Monticello, from Betts 1944:plate XXIII.

FIGURE 19

of trees and shrubs for the President's Garden". King, the son of city surveyor Robert King, and a city surveyor in his own right, divided his list into three categories, the second of which specified trees "for close plantation, & Clumps & for Screens". Included here were common Locust, red bud, and golden willows, species which were to figure prominently in the Poplar Forest landscape (Rutland and Mason 1984:94-95). Together with a plat entitled "Design for the President's Square, Washington", dated circa 1807, the list documents Jefferson's intention of introducing clumps to the landscape of the President's house (Brown 1990:122-23).

Jefferson's interest in clumps remained alive as he began improving the grounds at Poplar Forest in 1812. Perhaps he learned from his experiences at Monticello, planting in the fall instead of the spring, and substituting new species of trees. Only redbuds and tacamahac (or balsam) poplars were retained. The Poplar Forest clumps, to be set at "each corner of the house" were composed of Athenian and balsam poplars, intermixed with "locusts, common and Kentucky, redbuds, dogwoods, calycanthus, liriodendron" (Betts 1944:494).⁸

⁸. Jefferson utilized young Athenian poplars which he had planted in the "truck patch" or nursery in 1811 (Betts 1943:465, 494), as well as native species probably present on the property. Where the calycanthuses and balsam poplars came from is unknown. He planted calycanthuses at Poplar Forest in January of 1812, but by May 19, only one was living. Mr. Clay seems to have been a local source for Monticello aspens and European mulberries in a pinch; perhaps he supplied the needed clump trees. It's also possible that Jefferson brought them with him on his trip from Monticello. In any event, in late November when the clump was planted, he counted 16 calycanthuses on the property, probably

Miller, in his Gardener's Dictionary, described several of the trees intermixed in Jefferson's clumps, providing insights into their value as ornamentals. Calycanthus, though characterized by short purple flowers that "have a disagreeable scent" when they appear in May, are redeemed by a strongly aromatic bark. Dogwoods, he noted, have early flowers in spring. Robinia pseudoacacia, or common locusts, provide white flowers (Miller 1768). Other plants added to the clump also were characterized by ornamental flowers or aromatic bark: redbuds with their clusters of pink flowers in the spring, liriodendron with large green and peach colored, tulip-like blossoms in the spring, and tacamahac poplars carrying the strong scent of balsam (Little 1992:321, 436, 518-19).

The intended longevity of the clumps is a puzzle. While it could be argued that for introduced species, Jefferson had no clear idea of the height or breadth of a mature tree, he could predict these characteristics for species like liriodendron and locusts, which abounded in woodlands and indeed, around his house at Poplar Forest. Realizing that a mature liriodendron grew to a height of eighty feet or more, and that a Kentucky coffee could reach seventy feet, he must surely not have intended that his clumps would survive to maturity. If trees were regularly removed and replanted, this

divided between the four clumps and the south lawn border plantings (Betts 1943:494).

activity should be visible archaeologically.

From 1990 until 1993, excavations were undertaken northwest of the house, between the edge of the outer boxwood circle and the base of a large magnolia. In all, eighteen units were excavated (Figure 3). The stratigraphy in this area consisted of four layers: topsoil, a thin layer of red clay dating from the late nineteenth to the mid twentieth century, a layer of red clay with gravel, and a layer of red clay with silt and some charcoal. This final layer sealed, and was intruded by, a number of large planting stains and root disturbances, some of which are attributable to the 1812 clump and its descendants.

As described in an earlier interim report, the gravel layer sealed, and was sealed by, a brick path running parallel to the house. Was this a part of the Jefferson landscape design? The author concluded:

Soil excavated from beside the walkway in unit 579 contained an early cut nail with wrought head and tip. That evidence combined with the fact that the path is constructed of handmade bricks, sits directly beside the planting stains, and follows the line of the house, indicates this is a Jeffersonian feature" (Strutt 1992:17-18).

Subsequent research has provided evidence that requires a new interpretation.

An analysis of the bricks used in the construction of the path demonstrated that they do not match the dimensions of those found in the walls of the house. While not actually providing a date for the path, the comparative analysis

established that it was not laid with bricks used to build the house.

Excavations of the gravel layer which surrounded the path and stretched across the northwest yard confirmed that the path was a Hutter feature dating to the mid-nineteenth century. The gravel continued to yield large quantities of artifacts, including nails. Of a total of four hundred and nine complete nails recovered from this layer in eighteen units, 2.7% (11) were wire, 45.0% (184) were fully machine cut, 20.0% (82) were cut with hand wrought heads, and 31.5% (129) were fully wrought. Many of the nails were found in an excellent state of preservation, suggestive of burning. A quantity of window glass, some of it melted, was recovered in the same layer. Thus it seems likely that the early nails represent the remains of the original roof and associated woodwork which was destroyed in the fire of 1845, and that the layer includes a significant deposition of the fire-related activities of demolition, cleaning and rebuilding. Other objects recovered in association with the architectural debris confirm that the major period of deposition for the layer dates to the mid-nineteenth century. Ironstone, flow blue decorated whiteware, porcelain buttons, wire nails and a civil war era button and bullet indicate post-Jefferson deposition. The TPQ for the layer, 1880, is based on the presence of fragments of Portland cement found in one unit. In summary, based on the fabric of the path itself, and on surrounding

stratigraphy, the path can be attributed to the Hutter period.

The gravel layer appears to become thicker as it spreads to the northwest. It reached a thickness of 0.35' in ER729, thinning to 0.2' in ER529 and to just over 0.1' in ER582. Whatever its function, it appears to be associated with some depositional activities originating some distance from the house as well as rebuilding resulting from fire damage.

The layer of red clay with silt beneath the gravel layer appears to date from the Jefferson period through the Eppes and early Cobbs residency, with a TPQ of 1830 based on the presence of fully cut nails. Other objects recovered included blue transfer printed, handpainted and shell edged pearlware, a stoneware jug neck, a fragment of undecorated whiteware, a flowerpot fragment, green bottle glass, animal bone, a fragment of flint and a curious micaceous stone shaped into an octagonal form, a few wrought, combination and cut nails, a scattering of window glass, and a few brick fragments.

When planting stains 579D and E, 582C, and 584D, E and F were located in mid layer, the layer was separated and excavated as two deposits, one sealing the features and one intruded by them. However, no apparent soil change or change in artifact density was observed, suggesting that the layer as a whole represents gradual accumulation over time, and that in the course of its deposition, planting activities disturbed it. Features 579E and 584E and F probably represent slightly later plantings than those that made up the original

clump. It appears that 579D, 582C and 582D, however, may represent evidence of original trees surviving as late as 1830, or being replaced by new trees to maintain a part of the clump as late as that date. Because the soil stains left by these plantings are so subtle, it is impossible to be sure whether these features intruded earlier features, or are a continuation of stains that showed up most clearly against sterile subsoil. Since only 584D contained artifacts, and then, only brick fragments, the features cannot be precisely dated.

Yet because similar planting stains are not present in the gravel layer above, which was formed by depositional activities between 1830 and 1880, it is clear that the Jefferson clump did not survive as a landscape feature much beyond 1830.

The red clay and silt layer sealed subsoil and a number of planting stains. For the most part, these were extremely amorphous features characterized by very slight differences in soil compactness and small amounts of charcoal in their fill. It is possible that some of these may have intruded the red clay layer, and not been detected until excavators could see and feel them more readily against the compacted red subsoil.

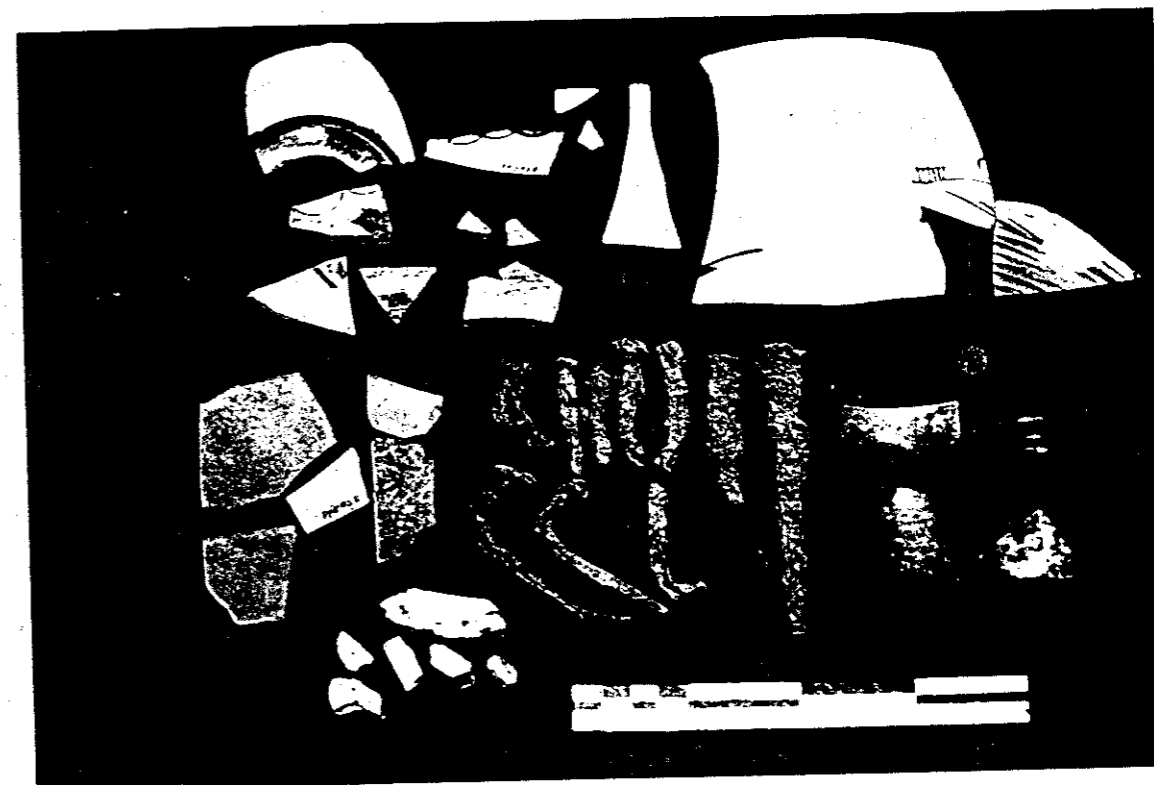
Details concerning the depth, shape and artifact contents of individual planting features can be found in Table 3. Only ER592E contained an assortment of datable artifacts (Figure 20). These included an incomplete blue painted pearlware bowl

TABLE 3
PLANTING FEATURES IN NORTHWEST CLUMP

| CONTEXT | DEPTH | ARTIFACTS | COMMENTS |
|---------|-------|-----------|---|
| ER584J | 0.7' | none | long, oval stain, irregular base |
| ER592E | 0.7' | yes+ | straight sides, flat base |
| ER592G | 0.5' | nail | shallow circular stain |
| ER592H | 0.25' | none | irregular stain, root running to south |
| ER592J | 0.25' | none | ER592J,K,L and N are very shallow features within a larger stain. They may represent individual plantings, or one large amorphous stain |
| ER592K | 0.25' | none | |
| ER592L | 0.4' | none | |
| ER592N | - | none | |
| ER728C | 1.2' | brick | straight sides, deeper at west end |
| ER728D | 1.15' | none | oval stain, irregular base |
| ER728G | 0.8' | none | long, irregular stain with irregular base |
| ER728H* | 1.7' | brick | not completely excavated |
| ER728N | 0.8' | none | straight sides and base |
| ER729D | - | - | unexcavated |
| ER729E | 1.0' | none | oval stain with root stain along south |
| ER729F | 0.7' | brick | straight sides and base |
| ER730D | 0.7' | none | oval stain |
| ER730F | 0.8' | none | irregular base, deeper in west end |
| ER740P | 0.45' | none | irregular base, root leading to the north |
| ER997D | 1.1' | none | relatively straight sides, flat base |
| ER997E | 0.6' | none | small stain, irregular profile |
| ER997F | 0.5' | none | small stain, may be part of 997E |

*ER728H also includes ER585G and 579H. Only the portion of the stain in ER728 was excavated.

+ ER592E contained wrought and wrought/cut nails, painted and blue printed pearlware, chinese porcelain, a faceted black glass button, window glass, green bottle glass, a brick fragment and some bone.



Artifacts from planting feature ER592E, (left to right): polychrome painted pearlware teabowl and saucer, chinese porcelain, blue painted pearlware bowl with chinoiserie pattern, blue printed willow pattern pearlware, undecorated pearlware plate base (burned) window glass, handwrought nails, green glass faceted button, green bottle glass, burned bone fragments.

FIGURE 20

which was found to crossmend with a sherd recovered several hundred feet away in an area known to have been used in the mid-nineteenth century as a garden, and suspected to have been the site of a Jefferson era kitchen garden. It is possible that the the deposition of the bowl fragments in two such widely separated contexts may indicate original deposition in a common compost pile, the contents of which were then used at several planting sites.

Because the southernmost edge of the clump area has not been excavated, it is impossible to measure its dimensions precisely. Nevertheless, the clump appears to have formed a circle some twenty four feet in diameter, with its center approximately twenty five feet northwest of the northwest wall of the house (Figure 21, Frontispiece). Based on the evidence at hand, it contained a minimum of eighteen to twenty two trees during its lifespan⁹, although the trees were probably fewer in number at any given time. For example, features 728C, 728D, 728N and 740P may represent a series of replantings in the same area, as may features 730F, 997F and 997E. Still, there was no evidence of planting holes cutting each other. If plants were replaced, it appears that new ones were planted beside them rather than on top of the original planting holes.

⁹This total depends on whether features ER592J, K, L and N are interpreted as four separate plantings that gradually grew together, as one planting with an irregular network of roots, or as one planting that died and was replaced three times.

EXCAVATED FEATURES NORTHWEST YARD
 TREE CLUMP AND OVAL SHRUB BED

FIGURE 21

NORTH



Currently, two forms of analysis are underway which may enable us to make more precise statements about the relationships between plantings, and the placement of individual trees. The first of these, a feasibility study on phytolith identification, is nearing completion. In 1992 ten soil samples, collected from planting features and their associated layers excavated across the property, and including four from the area of the clump, were sent to the Governor's School for Science and Technology in Lynchburg. There, students in Dr. Cheryl Lindeman's senior biology classes have been breaking down the soils chemically. Using super VHS videotape, they have recorded the residue, which may or may not contain phytoliths. These tapes have been sent to Dr. Irwin Rovner of the Department of Anthropology at North Carolina State University for identification. Concurrently, he has been extracting phytoliths from leaf samples that were collected by Poplar Forest staff members from trees with known Jefferson associations growing either at Poplar Forest or at Monticello. These samples form a study collection against which the archaeologically excavated phytoliths can be compared. Results of this study should be forthcoming by the summer of 1994, at which time an assessment will be made concerning the long term use of this type of research at Poplar Forest.

Complementary research, through the identification of roots excavated from the clump context and other sites, is beginning to yield results. Initial identification of root

materials through thin sectioning and microscopic examination was undertaken by Scott Moody, an undergraduate at Central Virginia Community College, and Dr. Jim Valentine, a biology professor at that college. Their work resulted in the identification of a locust root from ER584C, the red clay layer sealing subsoil above the northwest clump. Students in Dr. Lindeman's biology class at the Governor's School are continuing this study.

The Oval Bed

In a planting memorandum from Poplar Forest dated November 1, 1816, Jefferson recorded that he had "planted large roses of difft. kinds in the oval bed in the N. front. dwarf roses in the N.E. oval. Robinia hispida in the N.W. do." (Betts 1944:563). Although this is the first mention of oval beds at his Bedford County retreat, the wording of the quote suggests that the beds themselves predate the November 1 plantings, although by how much it is impossible to say. In any case, the oval shrub beds, like the clumps, illustrate Jefferson's introduction of landscape elements to his retreat which he knew both from his experiences in Europe and from his own planting designs at Monticello. His choice of robinia hispida for the northwest oval would have met with the approval of Philip Miller, who, in his Gardener's Dictionary, noted "The rose acacia...on account of its large, beautiful branches of rose-coloured flowers, is one of the most valuable

shrubs we have for ornamental plantation" (Miller 1768).

In describing the gardens at Blenheim, which he observed during his tour of English gardens in 1786, Jefferson noted,

...except this the garden has no great beauties. It is not laid out in fine lawns and woods, but the trees are scattered thinly over the ground, and every here and there small thickets of shrubs, in oval raised beds, cultivated, and flowers among the shrubs (Betts 1944:114).

This unfavorable impression of the garden as a whole did not, apparently, extend to its constituent parts. Oval beds of shrubs or of flowers were planted at both Monticello and later, at Poplar Forest.

An 1807 sketch of shrub circles and corresponding oval flower beds on the east and west fronts at Monticello indicates their size and placement relative to the house (Figure 19). In April of that year, gardeners at Monticello planted a fraxinella in the center of the northwest shrub circle, one gelder rose each (*viburnum opulus rosea*) in the center of the northeast and northwest circles, and a laurodendron in the margin of the southwest circle (Betts 1944:334)¹⁰.

¹⁰ In November of 1809, Jefferson "planted from Mr. Lomax's 3. Modesty shrubs, viz. 1. in N.E. circular bed, 1. in N.W. & 1. in S.W. do." (Betts 1944:387).

These shrubs were described by Lomax as "a beautiful flowering shrub which I took from the Woods, and not knowing its real name, have given it that, of modesty, from its handsome delicate appearance, a quality which will disgrace no Garden" (Betts 1944:417). Whether these replaced or supplemented the existing plantings is not clear.

Two months later, in a letter to his granddaughter Anne Randolph, Jefferson described a plan for plantings on the west lawn:

I find that the limited number of our flower beds will too much restrain the variety of flowers in which we might wish to indulge, & therefore I have resumed an idea, which I had formerly entertained, but had laid by, of a winding walk surrounding the lawn before the house, with a narrow border of flowers on each side. This would give us abundant room for a great variety. I enclose you a sketch of my idea, where the dotted lines on each side of the black line shew the border on each side of the walk. The hollows of the walk would give room for oval beds of flowering shrubs... (Betts 1944:349).

Jefferson's plans for the west lawn planting plan are preserved in two drawings, one of which dates to 1807 (Figure 22). New beds were prepared in 1808, and Jefferson advised his granddaughter that he would bring a variety of roots and plants to Monticello the following spring (Betts 1944:363-64). While the successes of individual beds may have varied, shrub ovals on the west lawn did survive at least until 1825, when they were recorded by Jane Bradick in her watercolor rendering of the west front of the house.

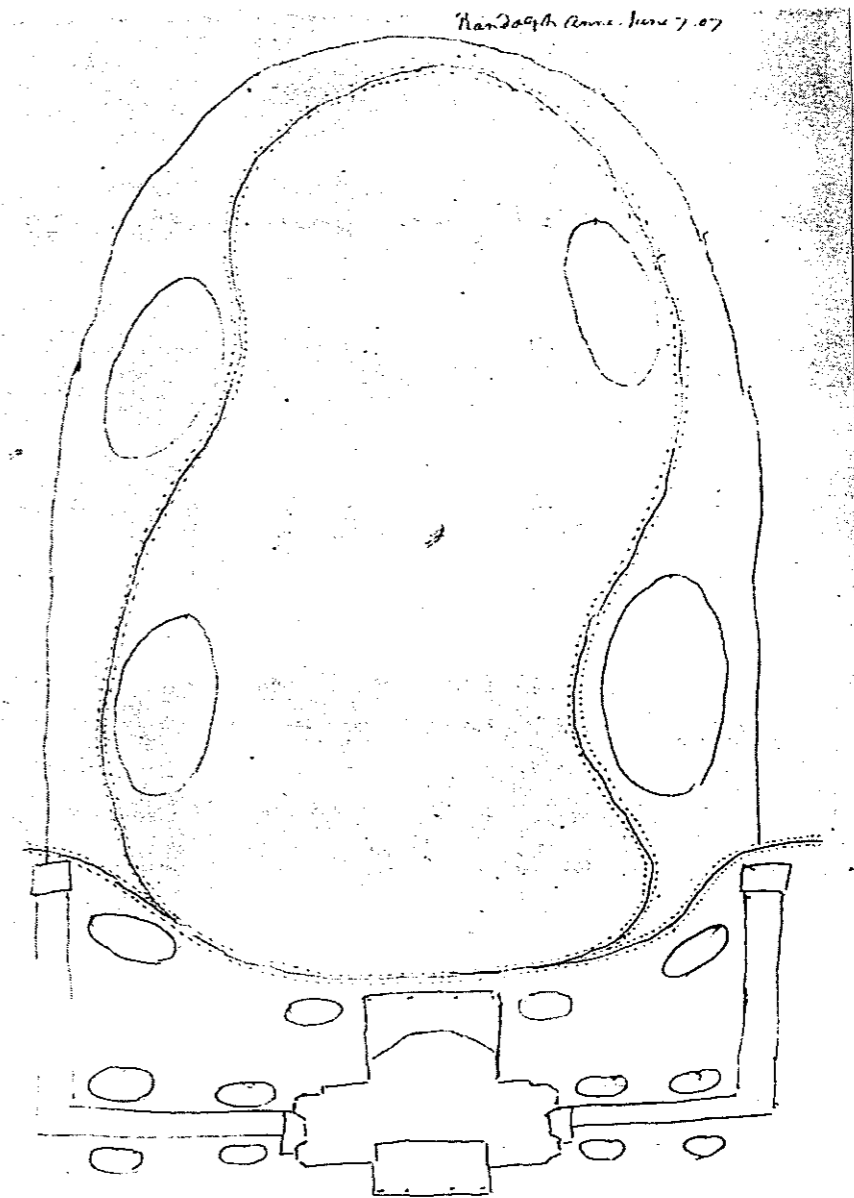
The 1816 planting memorandum at Poplar Forest was frustratingly vague in locating the shrub ovals there, beyond placing them in some arrangement north of the house. Happily, during the excavation of the northwest clump, the remains of the northwest oval bed for *robinia hispida* were located and explored.

The bed was sealed beneath the same red clay layer that

sealed the planting stains of the clump, establishing its contemporaneity with those features. The bed begins ~~48'~~^{38.5'} from the corner of the north and northwest faces of the house and from that point, heads to the northwest at a forty five degree angle from the north face (Figure 21, Frontispiece). Although its full length was not exposed, the feature was between sixteen and twenty feet in total length, and six feet wide. These dimensions are shorter and narrower than those of most of Jefferson's west lawn ovals (Figure 22).

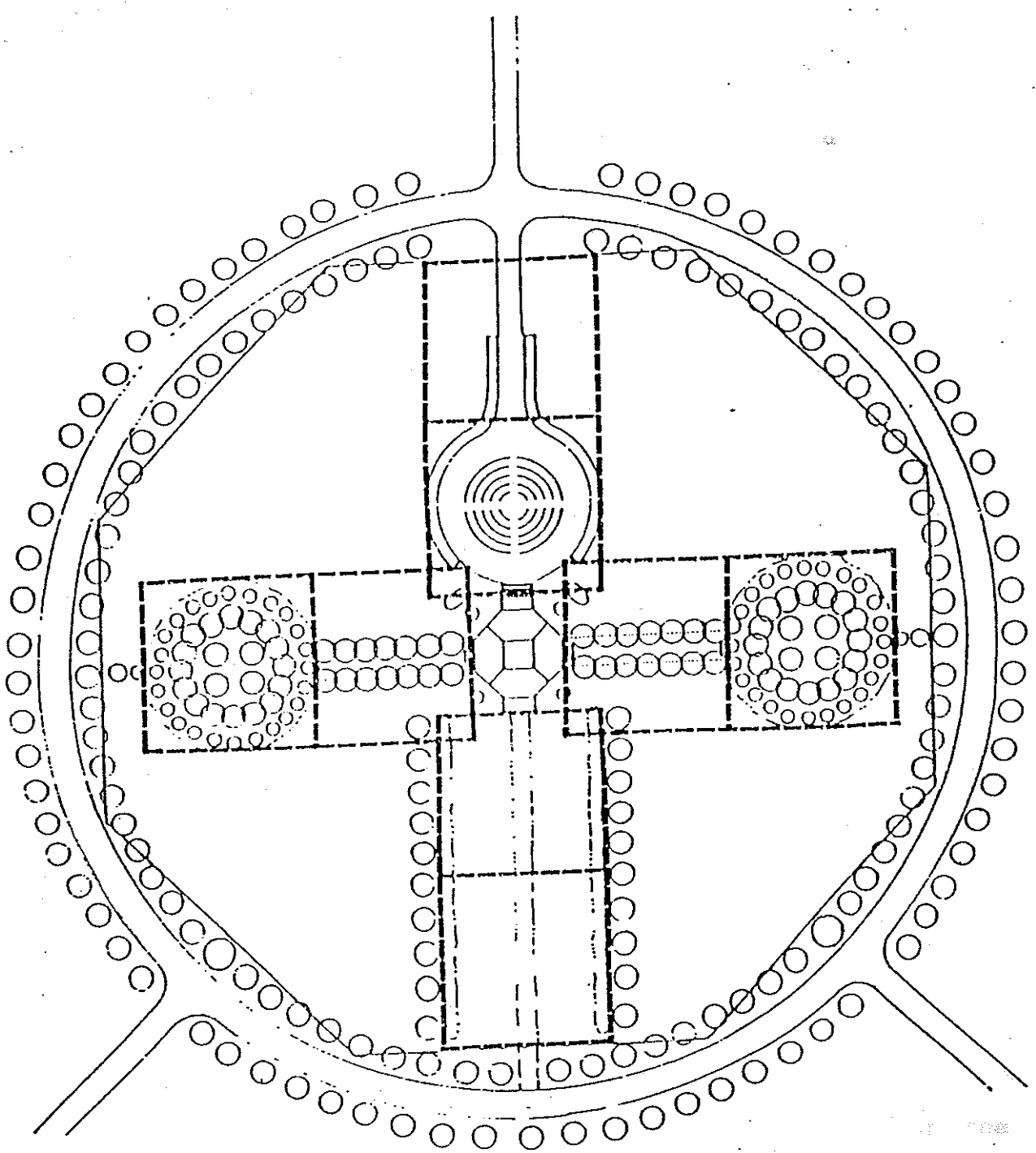
Interestingly, the bed lies within an area postulated by C. Allan Brown to be a Jefferson-era carriage turnaround (Figure 23). Drawing on documentary and extant above ground evidence, Brown predicted that a carriage turnaround, one hundred feet in diameter, sat directly north of the north portico of the house, and fit proportionately into the overall geometric scheme for the property employed by Jefferson when designing his landscape. Brown's model is conceptual, and acknowledges that ideal dimensions often underwent some degree of translation from paper to reality. However, the bed's siting squarely within the bounds of the supposed carriage turnaround suggests the need for a closer look at this area.

The bed was filled with red silty clay and charcoal. Only the east half of the feature was excavated, revealing sloping sides leading to a fairly flat bottom. At the bottom of the bed, which reached a maximum depth of approximately 0.4', charcoal became more concentrated. The shallowness of



Oval planting beds on the west lawn of Monticello, from Nichols and Griswold 1978:Fig. 56.

FIGURE 22



Hypothetical model of Poplar Forest's landscape divided into 100⁺ modules, from C. Allan Brown 1990:Figure 13.

FIGURE 23

the feature is consistent with contemporary accounts which describe such ovals as raised beds. As such, most of the soil for the planting sat above grade, and was either removed or spread across the yard surface when the bed was abandoned. The remaining fill of the feature contained brick fragments, but no dateable artifacts.

Two planting stains intruded the fill of the bed. Both were small irregular stains characterized by dark brown soil and charcoal. They probably represent the remains of individual plantings of prickly locusts, or later shrubs placed in the oval. Because they did not appear until the oval feature was exposed, they do not represent intrusive plantings from the period after the bed was no longer in use. Soil samples were collected from the fill of the bed, and will be subjected to phytolith analysis if the feasibility study proves successful.

Conclusions

In studying Poplar Forest, landscape historian C. Allan Brown suggests a series of geometric principles that Jefferson employed to unite each part of his overall plan for the grounds. From the cardinal orientation of the structure, to the use of one hundred foot planning modules which draw on the diameter of the house (fifty feet), the overall scheme of Poplar Forest reveals "a unity of concept" (Brown 1990:117-139). Archaeology has added two new examples of this

harmonious interplay of parts, while simultaneously challenging one of Brown's assumptions. In the layout of the clump, we see a halving of the diameter of the house itself; in the placement of the shrub oval, a halving of the hundred foot module. The orientation of the bed reflects the forty five degree orientation of the octagonal walls of the house itself, carrying the idea of the octagon into the landscape.

Yet the location of the shrub oval challenges the predicted bounds of a Jefferson period carriage turnaround, demonstrating the need for a closer examination of this area in the future.

Excavations in the northwest yard have also contributed to our understanding of the evolution of the property. Whether the Hutterers intentionally cut trees down, or merely allowed them to die and elected not to replace them, is unclear. However, placement of the clump and oval bed relative to the mid-nineteenth century path and to the boxwood plantings in front of the house, combined with the artifactual and stratigraphic evidence which allows us to date their disappearance, together support the notion that the Cobbs/Hutterers significantly altered the landscape at the north front of the house during their residency.

Of equal importance, excavations have documented the internal structure of two common early nineteenth century landscape features, and in so doing, have demonstrated that even ephemeral arrangements of shrubs and trees can be read in

the soil. While further research will clarify our ability to study the contents of the clump or shrub oval in more detail, the field results prove the value of historical archaeological techniques in studying lost landscapes.

VIII. THE NORTHEAST YARD

The Clump

As part of the new drainage system, an old fuel oil tank was removed from the northeast yard, and a concrete box put in its place. Because of the age of the tank, it seemed likely that oil seepage had occurred around its perimeter. If such a leak were found, the surrounding contaminated soils would need to be removed. In preparing for this possibility, two ten foot squares (ER772 and ER773) and a 5' x 10' unit (ER951) were excavated just northeast of the tank in order to record any information about the northeast clump prior to possible soil removal.

The stratigraphy in these units was nearly identical to that found on the northwest side of the house. Topsoil sealed a layer of brown loam with gravel, which dated to the mid-nineteenth century, and contained numerous nails attributable to fire debris and rebuilding. This layer sealed a layer of red clay and silt, beneath which numerous planting features were discovered to be intruding subsoil.

A posthole/postmold complex intruded the gravel layer in ER951. The hole was filled with red clay and some charcoal,

and contained brick fragments and window glass. The fill of the mold consisted of brown loam and small stones, and would have held a post approximately 0.8' in diameter. The relationship between these features and the gravel layer suggests that the posthole/mold date to the late nineteenth or early twentieth century.

In ER772, a planting stain was exposed while the red clay and silt layer was under excavation. Although no soil change or change in artifact type or density was observed, the layer was divided into ER772B and 772D, with 772C being the designation for the intrusive feature. The feature was located in the southwest corner of the unit, and was only partially excavated. A few pieces of charcoal and some brick fragments were recovered from its fill, but a lack of other artifacts make it impossible to assign a date to the feature.

In ER773, a planting stain appeared less than 0.1' above the interface between the red clay and silt layer and subsoil. In this case, the layer was not divided in two. The feature itself, ER773D, contained dateable artifacts, and received its TPQ of 1830 from the presence of fully cut nails. While it is possible that these were mixed into the fill of the hole after the tree died, it is probable that the feature represents a post-Jefferson planting.

Beneath the red clay and silt layer, eight planting stains and numerous root disturbances were exposed, mapped and excavated within the three units (Figure 24, Table 4). Their

TABLE 4
PLANTING FEATURES IN NORTHEAST CLUMP

| CONTEXT | DEPTH | ARTIFACTS | COMMENTS |
|---------|-------|-----------|---|
| ER772C | 0.6' | brick | intrusive to red clay and silt layer, may postdate clump, not completely excavated |
| ER772G | 0.8' | none | west side is .4' deeper than east, not completely excavated |
| ER772H | 0.35' | none | shallow oval stain, not completely excavated |
| ER772Q | 0.9' | none | oval stain with irregular base, east side is deepest |
| ER773D | 0.9' | yes+ | feature was observed intruding the bottom of the C layer, and contains artifacts which post-date the Jefferson period. Straight sides, irregular base |
| ER773G | 0.25' | none | oval stain, very shallow |
| ER773J | 0.4' | none | oval stain, flat base |
| ER773K | 0.6' | none | small stain, taproot? |
| ER773L | 0.45' | none | oval stain, flat base |
| ER951E | 0.55' | none | squarish stain, straight sides and flat base |

+ ER773D contained window glass, brick fragments, a fragment of an unidentified tooth, two wrought and four fully cut nails, and a fragment of lamp glass.

placement, compared to the placement of stains on the northwest side of the house, suggests that they mark the remains of trees planted in the center of the northeast clump.

Drain Survey

To drain the basement of the house, a pipeline was planned which would run from the northeast face of the house to the edge of the North Grove, covering a distance of some 320'. Because no archaeology had been undertaken near the proposed drainage route, a series of test units were excavated to determine the stratigraphy of the yard and to locate any archaeologically sensitive areas. Following the testing, a backhoe trench was dug the length of the drainline to subsoil. This trench was divided into ten foot sections and clean-scraped to look for additional features that were missed by the testing interval. All artifacts and features found within each section were recorded.

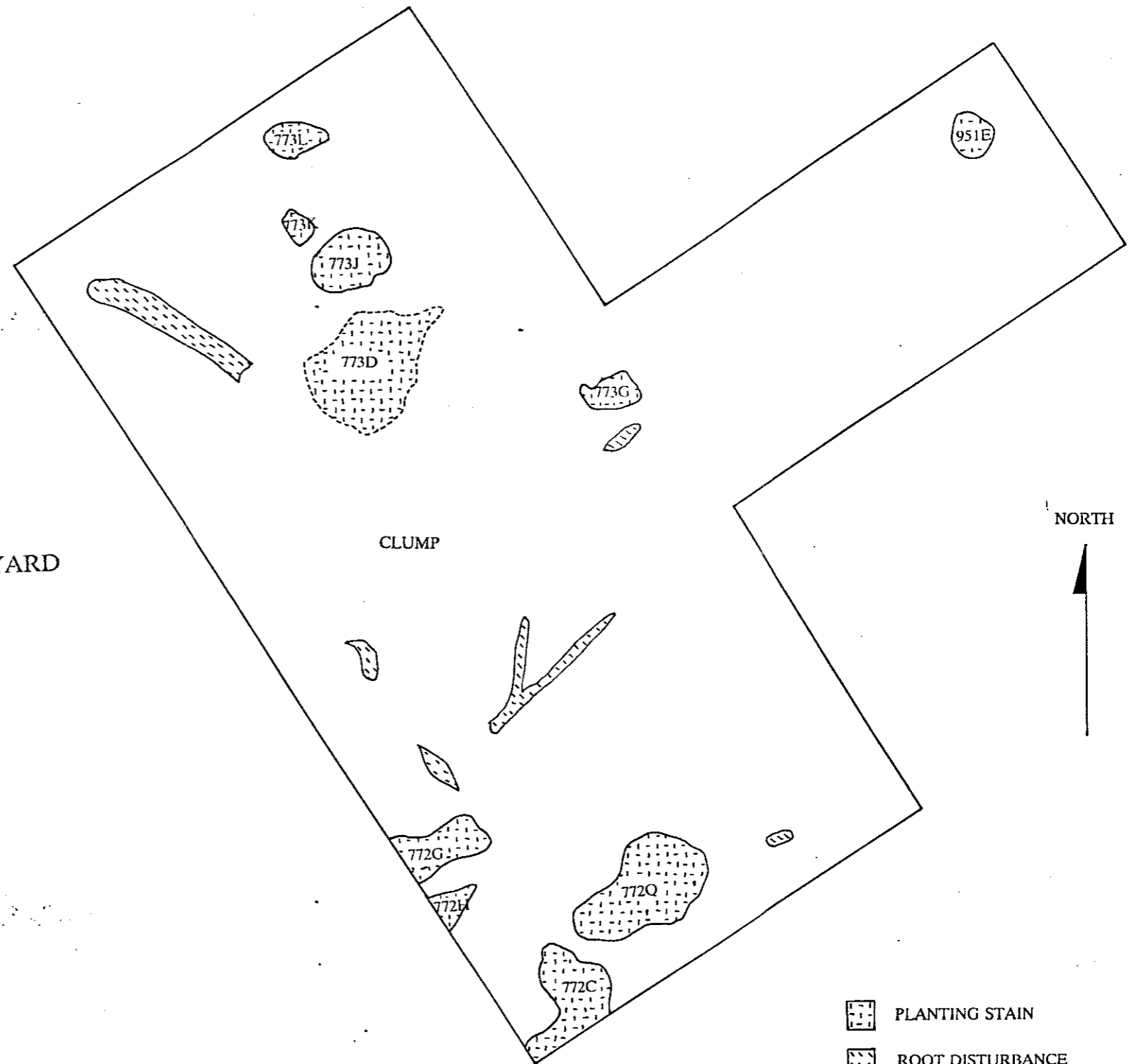
The first phase of the drain survey consisted of systematic testing at 15' intervals, beginning five feet east of the eastern edge of ER951. In all, staff archaeologists excavated thirteen 2' x 2' test units (Figure 3) in the proposed drain line, and one in a shallow depression just north of the drain line. An approximately 5' x 15' unit was cut through the gravel road leading to the tenant houses, and the final 2' x 2' test placed approximately 5' northeast of it.

NORTH PORTICO

EXCAVATED FEATURES NORTHEAST YARD
TREE CLUMP

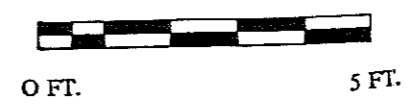
FIGURE 24

NORTHEAST WALL OF HOUSE



NORTH

- PLANTING STAIN
- ROOT DISTURBANCE
- SUBSOIL



The stratigraphy of the northeast yard consisted of a layer of red brown clay with small amounts of gravel and charcoal sealed by topsoil. Beneath this layer was a thin layer of red brown clay sealing subsoil at an average depth of approximately .75-1.0' below grade. A thin scatter of artifacts was found across the site, and established a mid-nineteenth century deposition date for the "gravel" layer, and an early nineteenth century date for the red brown clay sealing subsoil. The unit located just north of the line in a shallow depression uncovered a quantity of twentieth century material filling in a large tree hole.

Testing at ER770 yielded an unusual concentration of artifacts in the gravel layer, and exposed part of a feature. As a result, ER770 was expanded to become a 7' x 8' unit with an unexcavated 2' x 3' area in the northwest corner. An additional 4' x 8' unit, (ER950) was opened up to the east. Together, these two units yielded a wide variety of artifacts with a TPQ of 1830. Sealed beneath the gravel layer were four features intruding subsoil.

The largest of these stains, ER770B, was roughly square in shape, and less than 0.1' deep. It was filled with red brown clay and charcoal containing two cut nails, a burned piece of blue printed whiteware, and brick fragments (TPQ 1830). ER770C contained brown loam, charcoal and greenstone fragments, and reached a depth of 0.8'. Numerous brick fragments were recovered in its fill. It appears to be a

planting stain, as does ER770D. That feature contained the brown loamy remains of a concentration of roots originating from a tree originally located to the north. Finally, ER950B contained dark brown loam, and reached a depth of 0.3'. No artifacts were recovered from its fill. It appears to have been a planting stain.

More significant than the features themselves was the assortment of artifacts found in these units. Nine wrought and seventeen cut nails, as well as brick fragments, chunks of mortar and window glass were uncovered in the gravel layer of ER770. In addition, creamware, mocha decorated pearlware, green bottle glass, animal bone, a black glass button, a green glass bead and lead shot were uncovered. Why these objects were deposited in a small area some 50' north of the wing of offices and 85' northeast of the house itself is puzzling. Future testing north and south of the drainline in this area should be undertaken to see if a building was located nearby.

ER785 cut through the existing gravel road. Several layers of earlier road gravel sealed an approximately 3.5' width of cobble road surface dating to the Hutter period. This surface was located in the southwestern end of the unit. Several root stains and one small planting stain were found above subsoil, but no evidence of Jefferson's circular road, or of a corresponding fenceline, was seen.

Following the completion of testing, the entire length of the drainline was exposed by a backhoe trench dug to the

subsoil interface. Several small stains were uncovered along its length, as well as one large tree planting stain located in ER958. This was filled with an assortment of twentieth century objects, and the date of the tree planting could not be ascertained. Since no significant features lay in the path of the drainline, construction work proceeded according to schedule in this area.

Foundation Units

In 1989, two test units were dug along the northeast wall of the octagonal house. ER204 was centered on the northeast wall, and ER205 abutted the east face of the north portico (Figure 3). Both units were completely disturbed by waterproofing activities in the 1940s, as well as by the installation of an underground oil tank, and, in the case of ER204, by the laying of electrical power lines. Additional units were excavated during 1992 and 1993 to examine the area more fully. During this second phase of excavations, ERs 953 and 722 were placed against the northeast wall of the house, and ER765 explored the space due north of a set of stone steps connecting the north yard with the south.

ER953 abutted the house, beginning at the juncture of the northeast wall and the north portico, and forming a ten foot square unit. On the surface, the unit included a two foot wide brick walkway dating after 1880, and a raised inlet pipe for the oil tank. Within two feet of the house, a thick bed

of gravel covered a layer of white sand atop a plastic sheet which sealed the ground surface. The gravel/sand/plastic system represented the most recent, temporary solution to water problems in the basement of the house. Along the northwestern corner of the unit, oil seepage from the filling of the tank had contaminated the soil to a distance of approximately 4' from the house wall. This soil was removed and dumped separately. No systematic attempt was made to recover artifacts in the oil-soaked soil.

Topsoil, gravel and the fill of a twentieth century utility trench, containing an iron pipe and copper encased wiring, were removed together. A second trench containing phone lines intruded the utility trench and was removed as well. A two foot wide disturbance attributed to the 1940s waterproofing operation was not excavated due to time constraints and the high volume of heating oil which had accumulated in its soil.

Once the twentieth century disturbances were removed, a layer, two features and a soil lens were exposed. A thin layer of red brown loam with charcoal and brick fragments (ER953D) extended across the unit. Numerous artifacts were recovered from the layer, including wrought and cut nails and nail fragments, iron hardware, mortar, slate and brick fragments, clear, green and aqua bottle glass, milk glass, window glass, whiteware, seeds, bones and terra cotta pipe fragments. The seeds, bone, and approximately 5%-10% of the

window glass were burned. This evidence, in combination with pockets of burned wood, a small area of scorched earth, and a fairly consistent distribution of charcoal throughout the soil, suggests that the layer was exposed in 1845 when fire debris accumulated and later, when it was discarded. This layer matches a similar deposit of burned material uncovered on the northwest side of the house. There, however, a quantity of nails were found which appear to have been burned, a process which retarded subsequent oxidation. The iron material from ER953 exhibited deterioration comparable to other iron objects found elsewhere on the site; it does not appear to have been burned.

This mid-nineteenth century layer was cut by a narrow builder's trench for the brick walkway along the eastern edge of the unit. In the southwest corner, the layer was sealed by a lens of redeposited subsoil that probably represents spill for the backfilling of the 1940s trench (ER953E).

Also intruding 953D was a small oval feature, approximately 1.2' east-west, filled with brown loam and red clay (ER953C). Most of this feature had been destroyed by the installation of the modern utility line. Nevertheless, what remained of it, when excavated, revealed a hole with smooth sides tapering to a narrow bottom. This probably represents the remains of a plant with a deep taproot. The feature contained only brick fragments and window glass, but its stratigraphic relationship with ER953D indicates a filling

sometime after 1850.

Layer D sealed three features, ER953K, a probable planting stain, ER953L/M, a posthole and its associated mold, and ER953P a repair to the post. ER953K was a shallow, oval feature filled with red brown loam and charcoal. The feature was cut in half by the 1940s drainline. What remained of it measured approximately 1' north-south by about 0.7' east-west. The hole was shallow (0.2' deep) and uneven, and contained window glass and wrought nails. ER953L, the postmold to ER953M, contained sandy brown loam with charcoal and brick fragments. Within its soil matrix, archaeologists recovered numerous artifacts, including burned vessel and window glass, Chinese porcelain fragments, burned seeds and wrought nails. The posthole itself, filled with red clay with brown mottling and some charcoal, also contained a quantity of burned vessel and window glass, wrought nails, burned seeds and some limestone. Based on the stratigraphic context of the feature and the quantity of burned material contained within both hole and mold, it is probable that the post relates to post-fire repairs to the northeast wall or portico by the Hutter family. ER953P intruded both the posthole and mold, and again contained burned glass. It may represent the remains of a replacement or repair post put in after L was removed.

Historic photographs of the west side of the house show the yard sloping sharply within a few feet of the foundations, placing the building in a bowl-shaped depression.

Unfortunately, the photographic collection contains no clear views of similar landscaping on the east side of the house. However, archaeological evidence from this area indicates that a depression had once existed here, and was filled in in the mid to late nineteenth century. This filling is represented by a thick deposit of dark brown loam sitting beneath ER953E. The deposit, divided in half and designated ER953G and 953J, contained numerous domestic artifacts, with a TPQ of 1850.

This mid-century deposit in turn sealed a thin layer of light brown loam with clay mottling and some charcoal, which sloped sharply towards the house. This layer (953F and 953H) dated to the Jefferson period, and contained window glass, numerous wrought nails, and an undecorated fragment of whiteware, a small brass cap, a slate pencil, and part of a bone toothbrush. It is tempting to attribute these latter items to Jefferson's granddaughters, whose bedroom window opened above. In a letter dated July 18, 1819, Cornelia Randolph wrote to her sister Virginia at Monticello, requesting that she send "a part of a pencil" that was to be found there, and complaining: "I cut the pencil that I got at Leitches this morning, & found so bad that it is impossible to draw with it" (Cornelia Randolph to Virginia Randolph, July 18, 1819, UNC-Trist).

The final layer of soil, ER953N, consisted of a thin deposit sealing subsoil. It contained a piece of burned glass, a rusted nail fragment, and some window glass.

ER722 was an irregularly shaped unit some 7.5' east-west by roughly 9.0' north south, and abutted the stone retaining wall where the wing of offices attached to the main house. The section of stone wall immediately adjacent to the house, and to the west of a set of stone steps, had been dismantled and rebuilt during the twentieth century in order to install electrical cabling. Additionally, pipe trenches associated with waterproofing disturbed much of the remainder of the unit's west side, while the eastern edge of the unit abutted the post 1880 brick walkway. Although thirteen separate deposits were identified, virtually all of them contained fill postdating 1880. Only the final layer, ER722M, appeared to have been undisturbed by subsequent utility work, and contained a range of artifacts dating from the Jefferson period through to about 1850.

Despite the degree of disturbance, two important discoveries were made during the excavation of this unit. First, a number of handmade brick fragments were found in fill adjacent to the brick walkway, suggesting that an earlier path, mirroring the path discovered on the northwest side of the house, may have existed in this area before the walkway was laid in the late nineteenth century. Second, the excavation established the slope of pre-1850s grade for this side of the house. Starting approximately 7' out from the wall of the house, the grade began to slope toward the house foundations at a rate of approximately 0.2' vertically per

foot horizontally. Between 5.5' and 6' from the house it dropped 0.6', and then continued its more gradual line. At 2.3' out from the house, the closest point to the foundations that had not been disturbed by waterproofing, subsoil was 1.4' lower than it was at 7.0' from the building. Because subsoil was sealed by a layer containing artifacts ranging in date from the early nineteenth century to the 1850s, it is unclear whether the grade as recorded was a Jefferson feature, or resulted from movement of earth around the foundations in the antebellum Hutter era. The existence of a Jefferson period sloping layer in ER953 suggests that the grade changes observed here were a part of the original construction scheme for the house.

Adjacent to ER722, archaeologists excavated a 5' north-south by 6' east-west unit (ER765) to investigate the relationship of the stone stairs to the surrounding stratigraphy, and the fabric of the stairs to the fabric of the wall in which they were set. During previous excavations in the wing of offices, archaeologists had concluded that the steps were a Jefferson period feature because the floor of the wing abutted them. However, the placement of the stair treads relative to the known height of the wing's roof made it doubtful that the stairs dated to the Jefferson era. Simply stated, the top step did not provide enough headroom for a pedestrian moving from the north yard through the wing, unless the wing's roof were modified in some way. Given these

conflicting lines of evidence, the stairs were examined archaeologically.

A red brown clay layer with some gravel and brick sat below modern topsoil. It contained cut and wrought nails, window glass, mold blown bottle glass, clear molded bottle glass, porcelain and pearlware fragments. Beneath this was a thin layer of brown red loam with wrought nails and window glass. It sealed a sterile deposit of red clay which resulted from the excavations undertaken to set the stairs in place. A second deposit containing brick, mortar and numerous mid-nineteenth century artifacts sat beneath the brick walkway, and was probably placed there in an effort to create a level surface upon which to lay the brickwork.

When the top stone step was lifted, archaeologists discovered a piece of plastic pressed into subsoil beneath it, indicating that sometime in the twentieth century the step had been lifted and relaid. Additional removal of soil and stones comprising the steps failed to reveal a Jefferson era builder's trench or Jefferson era mortar in the fabric of the masonry. Instead, it appears from the physical evidence of the steps that the wall of the wing originally ran contiguously from the house to the east mound. During the Hutter period, when the section of the wing closest to the house was destroyed, the wall was interrupted by steps, enabling north-south traffic to circulate more freely. Later still, in the twentieth century, repairs were made to the

steps, necessitating the removal of the top step and the repair of some masonry.

These findings in turn raise interesting questions about the layout of the wing. Originally, when the steps were attributed to Jefferson's design, archaeologists hypothesized that a walkway existed west of the wall for the "first" room (a cold storage room or dairy), through which people passed on their way to the steps. If the steps did not exist, then this space had no northern outlet. Instead, it is possible that it served as a small, unheated storage room wrapped around the east stair pavilion. Because of extensive modern disturbance within this area of the wing itself, only a narrow section of brickwork, approximately 3.5' wide, survived. This was cut by a large utility line, separating the bricks into two islands. The southernmost island appears to have been laid in a herringbone pattern, while the northernmost, adjacent to the north wall of the wing, forms an expanding rectangle. Based on these changes in pattern, it is possible that this space was actually divided further. The southern area perhaps served as an open passageway leading to a narrow storage space in the rear (frontispiece).

IX. CONCLUSIONS

A wide range of questions were asked, and answered, by archaeologists conducting excavations around the octagonal dwelling in preparation for the first phase of exterior

restoration work. Several important discoveries were made concerning the architecture of the house itself and the layout of landscape elements which embellished it.

First, evidence in each of the four basement rooms and in the two stair pavilions points to varying floor treatments, with the north room and east pavilion having been floored with brick, and the south and west rooms having, at the time of the 1845 fire, wooden floors. Evidence of both brick and wood flooring was discovered in the east room. Additionally, breaks in the burn scars from wooden flooring in the east room, and burn scars only in the south half of the west room suggest that these two rooms may have been partitioned at the time of the fire. Although nothing was learned of how these spaces functioned during Jefferson's ownership of the property, numerous artifacts dating to the Hutter residency were unearthed.

Scaffolding evidence in each of the stair pavilions and beneath the south portico provides clues concerning the original methods of construction for the house, and possibly, for later repairs. Two french drains, located south of the east stair pavilion, and west of the west stair pavilion, provide clues to drainage around the house. Additional archaeology is recommended to trace and more firmly date the west drain.

The documentation of the northwest tree clump and oval bed was a significant addition to our ongoing study of Poplar

Forest's landscape design. The placement of the clump and bed reflect Jefferson's application of mathematics to the planning his landscape. As importantly, these excavations have, for the first time, proven that ephemeral landscape features can leave tangible evidence to be uncovered and studied. While future phytolith and root analyses may refine our understanding of the ordering of these features, archaeology has already allowed us to place them in space, and study their internal makeup.

Finally, these excavations have provided new insights into the layout of the 1814 Wing of Offices. The discovery that existing stone steps date to the Hutter period has challenged us to rethink the use of interior spaces adjacent to the stairs, and the overall traffic flow from north to south on the property. Both issues are vital in understanding domestic life at Poplar Forest in the early nineteenth century.

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APPENDIX 1

RECOMMENDATIONS FOR FUTURE WORK:

I. Investigations are needed in the north yard area where artifact concentrations during testing suggest the proximity of a structure or dumping area.

II. Expanded excavations are needed in the north and northwest yard to further refine our understanding of the date and placement of the carriage turnaround.

III. Further excavations are needed to explore the extent of the french drain west of the house, and date it more precisely. This can be integrated into the excavations currently underway which seek to detect the location of mulberry plantings in the west yard.

IV. Comprehensive analysis of artifacts recovered from the basement of the house is needed. Although they cannot comment on the Jefferson period, a range of Hutter period objects may prove useful in understanding the use of rooms during the mid- to late nineteenth century.

V. Comparative artifact analysis between the northwest and northeast yard areas will help us refine our understanding of how use of these spaces differed during the Jefferson and Hutter periods.