IN SEARCH OF FORT SAN JUAN

Investigations at the Berry site (31BK22), Burke County, North Carolina

by

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ABSTRACT

This report summarizes fieldwork conducted by the 2003 Warren Wilson College archaeology field school at the Berry site in western North Carolina as part of the Upper Catawba Archaeology Project. This site represents the main town within a native chiefdom in the upper Catawba River Valley and the location of Fort San Juan, built in 1567 by Spanish soldiers under the command of Captain Juan Pardo, and presumably attacked and burned down during an 1568 uprising of native warriors against Spanish soldiers. We here briefly review fieldwork that was conducted at this site from 1986 to 2002. We then describe our excavations and findings in 2003.
## CONTENTS

Abstract ...........................................................................................................................................1

List of Figures .................................................................................................................................3

Acknowledgments ...........................................................................................................................4

Introduction .....................................................................................................................................6

Archaeological Background ...........................................................................................................7

2003 Excavation Results .................................................................................................................15

Artifacts .........................................................................................................................................35

Tables ...........................................................................................................................................36

Conclusion ......................................................................................................................................41

References .......................................................................................................................................44

Appendix A. Historical and Archaeological Background to Fort San Juan and Joara at the Berry site .................................................................47

Appendix B. List of Features at 31BK22. ......................................................................................56

Appendix C. List of Burials at 31BK22 .........................................................................................58

Appendix D. Identified Structures at 31BK22. ............................................................................58

Appendix E. Participants in the 2003 Warren Wilson College field school at the Berry site ........................................................................................................59
LIST OF FIGURES

Figure 1. Berry site location.................................................................6
Figure 2. Berry site, plan view of excavation areas, 1986-2003.......................10
Figure 3. Structure 1, wall exposed in 2001...........................................13
Figure 4. East wall of Structure 3, exposed in 2002.................................13
Figure 5. Plan map of excavations in Area A, Berry site............................16
Figure 6. Structure 1, trench excavation 2003, excavation units N888E206 (Top), N886E206 (middle), and N884E206 (bottom)..................18
Figure 7. Structure 1, unit N888E206, charred wall posts and potsherds........19
Figure 8. Burke curvilinear complicated stamped vessel fragments from Structure 1..........................................................19
Figure 9. Plan map of excavations in Area B, Berry site.............................21
Figure 10. Feature 25, before excavation................................................23
Figure 11. Feature 25, excavation complete..........................................23
Figure 12. Feature 38 before excavation................................................25
Figure 13. Feature 38, profile, west half excavated...................................25
Figure 14. Students cleaning Structure 3 for photograph...........................27
Figure 15. Structure 3, base of plow zone.............................................27
Figure 16. Plan map of excavations in Area C, Berry site..........................28
Figure 17. Plan map of excavations in Area D, Berry site..........................31
Figure 18. Area D, Excavation unit N800E160, plow zone removed............33
Figure 19. Area D, Feature 7 at top of subsoil.......................................33
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Historic Burke Foundation dinner

We would like to acknowledge here are many people who contributed to this project

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Introduction

This report summarizes fieldwork conducted by the Warren Wilson College archaeology field school at the Berry site (31BK22), in the upper Catawba Valley, western North Carolina (Figure 1), from June 2 to July 11, 2003. David Moore (Warren Wilson College), Christopher Rodning (UNC-Chapel Hill), and Robin Beck (Southern Illinois University) directed the field school whose participants included students from Warren Wilson College and Western Piedmont Community College as well as volunteers from the general public. The 2003 field season marked the third year of the field school at the Berry site following initial excavations conducted in 1986 by David Moore (Moore2002).

The Berry site is located about eight miles north of Morganton, North Carolina on Upper Creek, a tributary of the Catawba River. The Berry site is a large (nearly 12 acres) Mississippian site that dates to the Burke phase (15th and 16th centuries A.D.) and is believed to represent an ancestral Catawba Indian town. We also believe that the Berry site is the native town of Joara or Xuala described in sixteenth-century accounts of Spanish armies under the command of Hernando de Soto and Juan Pardo. Scholars have debated the routes of Soto and Pardo for years but archaeological investigations at the Berry site, provide evidence that both of these Spanish expeditions passed through the Catawba River valley. We have focused our investigations on the northern limits of the site where the remnants of an earthen mound are located and where previous work had revealed the presence of four burned structures. We believe these structures represent buildings associated with Fort San Juan, built by the inhabitants of Joara for Juan Pardo in 1567. The 2003 excavation expanded our understanding of these buildings and provided a wealth of new information about the Berry site.
Figure 1
Archaeological Background

Antiquarians and archaeologists have known about several earthen mounds in the upper Catawba and Yadkin valleys of western North Carolina since the late nineteenth century (Beck and Moore 2002; Moore 2002a). Some of these earthworks are low burial mounds, often including the burials of several individuals along with aboriginal and European material culture and stone cairns. Others are pyramidal mounds, which probably served as platforms for wooden structures and which marked the hubs of public life within native towns of the fifteenth and sixteenth centuries, and one such mound was present at the Berry site at that time.

Archaeologists from the University of North Carolina began surveying the upper Catawba and its tributaries in the 1960s, conducted test excavations at selected sites in the 1960s and 1970s, and did more intensive excavations at the Berry and McDowell sites in the 1980s (Moore 2002a; Ward and Davis 1999). Archaeological surveys along Upper Creek and Warrior Fork in the 1990s identified Berry as the main town and administrative center of a native chiefdom that included households who lived in villages and farmsteads in the surrounding area (Beck and Moore 2002). The recovery of European artifacts on the ground surface at Berry in the 1990s made it seem more and more likely that it was also the site of a Spanish fort and Spanish settlement during the sixteenth century (Moore and Beck 1994). Although the vast majority of the artifacts and many aspects of the architecture at Berry represent aboriginal material culture, the recovery of several Spanish artifacts from the ground surface and excavated contexts at the site have convinced us that Berry represents the native town of Joara where the Spanish Captain Juan Pardo built Fort San Juan and attempted to establish a permanent colonial settlement in the 1560s [See Appendix A for a more complete historical background of Joara and Fort San Juan]. Many of these probable Spanish artifacts—
including wrought nails, olive jar fragments, brass aglets, two possible fragments of chain mail, and wooden timbers with notches that may have been cut with metal tools—represent domestic debris rather than trade goods that circulated through native exchange networks. It is also worth noting that while the European artifact assemblage from the Berry site includes several sixteenth-century Spanish artifacts, it does not include any diagnostic eighteenth-century English trade goods.

Fieldwork in 1986 (Moore 2002a:213-256; See figure 2) included excavations of a trench into the mound and block excavations in an area at the southwestern edge of an earthen mound that once stood as much as 12 to 15 feet tall, and which may have been as much as 200 to 250 feet across, but which is now only visible as a slight rise in the field. The mound, or at least one of the stages of the mound, was built by the same kinds of basket loading techniques seen at earthen platform mounds at other sites the Southeast dating to the late prehistoric period. Excavation at the edge of the mound uncovered two burials (one of an adult male buried with a metal knife blade and a native toolkit), several features (including a pit dug to hold a monumental town pole as well as several possible roasting or storage pits), several postholes, and both native and European artifacts.

Several pieces of Spanish olive jar were found in deposits thought to represent the latest mound stage or perhaps the ground surface when the last stage was added to the mound. Aboriginal pottery from these excavations and from surface collections at dozens of other sites in the upper Catawba Valley of western North Carolina form the basis for the definition of the Burke series, the late prehistoric manifestation of the much broader Lamar ceramic tradition in the greater southern Appalachians.

The recovery of several Spanish artifacts from the Berry site in the late 1980s and early 1990s (Moore and Beck 1994; Worth 1994) and its identification as the main town within a regional settlement (Beck 1997; Beck and Moore 2002) led to an interest in
conducting gradiometer and soil resistivity surveys at the Berry site (Moore 2002a:60-61). In 1997, Tom Hargrove (Archaeological Research Consultants) identified several magnetic anomalies in an area of roughly one hectare at the northern end of the Berry site (Beck and Hargrove 2002). Four of these anomalies represent burned structures (Figure 2), an identification that has been confirmed by excavations conducted by the field school in 2001 and 2002. Several other anomalies that Hargrove identified at the Berry site have since been identified as pit features. In 2002, Gerald Schroedl and Myra Moore (University of Tennessee) conducted gradiometer surveys at the Berry site in areas adjacent to those Hargrove had surveyed (Schroedl and Moore 2002). Their surveys in 2002 did not identify any other burned structures, but one linear magnetic anomaly west of Structure 2 was identified as a possible palisade, or perhaps a series of pit features, although excavations west of Structure 2 in 2003 could not confirm this tentative identification. Gradiometer surveys in 2003 were conducted over the rest of the site, which covers an area of some five hectares, but at present no other burned structures have been identified.

The site grid for excavations in 1986 was aligned to magnetic north, and coordinates within that grid system marked the corners of excavation squares measuring 10 feet by 10 feet. Squares were designated according to the grid coordinates of their southeastern corners. All levels within each square, beginning with plow zone, were excavated with shovels and sifted through ½” mesh hardware cloth. The bottoms of each level, and the profile walls of each excavation square, were trimmed with masonry trowels.

Controlled surface collections and noninvasive surveys in 1996 and 1997 were conducted within a metric grid that paralleled an old field road, which still marks the edge between the field itself and a strip of woods along the creek, and fieldwork since
Figure 2
2001 has followed this grid. Our current grid north is seventeen degrees west of magnetic north. Pieces of rebar have been driven into the ground at grid points N900E200 and N880E200. The top of a metal stake near the field road beside the site—rebar placed inside a cinder block and marked with a red flag—serves as a vertical datum. An arbitrary elevation of 100 meters has been assigned to the top of this metal stake. Proton magnetometry and soil resistivity surveys in 1996-1997 and in 2002-2003 have been conducted in 20x20-meter units within this new grid. Excavations since 2001 have been conducted in 2x2-meter squares, although in some cases during the 2001 season excavations were conducted in 3x3-meter units. All levels within each square, beginning with plow zone, are excavated with shovels and sifted through ¼” mesh hardware cloth. The bottoms of each level, and the profile walls of each excavation square, are trimmed with masonry trowels in preparation for photos and mapping.

Features are excavated with trowels and other handheld tools. The volume of fill excavated out of each level or zone within each feature has been recorded. All feature fill—except for ten-liter flotation samples and one-liter soil samples—from every designated provenience within each feature is water-screened through half-inch, eighth-inch, and sixteenth-inch hardware cloth. Flotation samples and soil samples have not yet been processed.

The 1986 fieldwork included excavation of two burials. Our current protocol regarding burials is to identify, map, and photograph, features believed to be burials; we have not excavated any of these features. Since 2001, we have identified at least three and perhaps four other native graves.

Excavations in 2001 were conducted to expose areas where magnetic anomalies had been detected by gradiometer surveys, including anomalies that had been confirmed as burned structures through systematic auger testing (Beck and Hargrove
2001; Moore and Rodning 2001). We uncovered burned architectural debris at the edge of Structure 1, but we did not place any excavation squares inside the structure itself (Figure 3). We removed the plow zone in one excavation square to reveal burned timbers and daub from Structure 3, although it was not until the following year that we exposed the actual edge and two corners of this structure (Figure 4). The top of an aboriginal grave (Burial 4) was identified in the area west of Structure 3. The top of another grave (Burial 3) was exposed in the area northwest of Structure 1. We excavated Feature 21, a concentration of fire-cracked rock, and Feature 20, a cylindrical pit from which potsherds representing both local and non-local native ceramic styles were recovered.

Excavations in 2002 concentrated on exposing more of the edges and corners of burned structures, and on uncovering pits and postholes in areas around and between these structures (Beck 2002; Rodning, Beck, and Moore 2002). Burned debris from Structure 4 was uncovered underneath deposits that may represent mound fill, although at present it is still not clear if the structure predates or postdates the latest mound stage, or if erosion and plowing are responsible for depositing mound fill atop the collapsed remnants of this burned building. The southeastern edge of Structure 3 was exposed, as were all four of its corners. Part of the southeastern edge of Structure 2 was exposed, as were a series of large postholes outside of it. The northwestern and southwestern edges of Structure 1 were uncovered at its western corner, revealing a pair of entrance trenches from the kind of doorway that is typical of aboriginal houses in this region. Architectural debris from these structures includes burned timbers, which probably represent roof members, and portions of wall posts that are still in place in the ground. Light grayish brown fill, clearly distinct from the surrounding yellowish subsoil and from the dark brown deposits with burned wood and daub inside the structures themselves, encircles these structures.
Figure 3 and 4
Contiguous excavation squares south of Structure 2 revealed the presence of several pits and postholes in the area inside an apparent arc formed by the four burned structures. It is possible that this area was an outdoor plaza when the structures were standing, and we now know that the doorways to structures 1 and 3 at the Berry site do indeed open towards this space. Pits and postholes in this area may predate or postdate the structures themselves, and further fieldwork and artifact analysis is needed to clarify the temporal relationships between features and structures in the area north of the mound at the Berry site.

One of the features in this area is Feature 23, which consists of two contiguous pits, one circular and the other more oblong in shape, that together form a bilobed feature resembling a figure eight in planview. The south lobe of Feature 23 was wider but shallower than the north lobe. Hardpacked clay formed the bottom surface of the south lobe. Some pebbles and potsherds were embedded in this bottom surface. They may have been trampled and packed into the bottom of Feature 23 when its south lobe was still open. This part of Feature 23 may have served as a pit for processing daub or for other activities that necessitated such a facility. At the bottom of the north lobe of Feature 23 was a rectangular stain that may represent the top of the chamber in a shaft and chamber burial. We have not dug into this possible burial at the base of Feature 23 to confirm or disconfirm that identification. The north lobe of Feature 23 was dug after the south lobe and both lobes were filled in with a series of grayish brown deposits, and the uppermost deposit, which covered both lobes, was a layer of dark brown fill that included abundant amounts of artifacts, animal bone, and burned plant material. Artifacts from the feature include brass beads, scrap pieces of brass, clay pipe fragments, chipped stone tools and lithic debitage, shell beads and shell fragments, and hundreds of potsherds, most of which are attributable to the local Burke ceramic series, but some of which have
rims and paste characteristics similar to those of Dallas pottery from sites dating to the late Mississippi period in eastern Tennessee.

Oval pits designated features 25 and 33 were also uncovered in a series of excavation squares dug in 2002 to connect Feature 23 and Structure 2, and features 25 and 33 were saved for excavation in later field seasons. Feature 33 has not yet been excavated. Feature 25 was excavated this year and will be described presently.

2003 Excavation Results

Our goals for the 2003 field season were to expose more area around Structure 2 and also to excavate features near Structure 2, to expose Structure 3 in its entirety, to dig a trench into Structure 1 to learn as much as we could about its construction and abandonment, and to uncover postholes, features, and profile views of the stratigraphy in excavation squares near the southwestern edge of the mound. Excavations in these four areas in 2003 were referred to as areas A (Figure 5), B (Figure 6), C (Figure 7), and D (Figure 8), purely for the sake of convenience in record keeping and in supervising the fieldwork itself. These designations do not correspond to excavation areas A and B from the 1986 field season. Thirty-nine new excavation units were excavated through the plow zone level exposing a total of 156 square meters.

Area A (Figure 5) refers to Structure 1 (Beck and Ketron 2003). During the 2001 and 2002 field seasons, we had removed plow zone to expose portions of the semi-subterranean Structure 1 foundation. This basin feature was filled with the remains of burned but intact architectural elements of Structure 1; we did not dig into this structural debris itself. This year, we began to excavate into the filled structure basin to learn what kinds of deposits were present at and above its floor, and in the interest of developing strategies for more extensive excavations of this and other burned structures at the site. One 2x2-meter square was excavated at the northwestern edge of the structure, and two
Figure 5
adjacent squares to the south exposed structural debris inside its doorway. Excavations continued down into the matrix of burned sand and wood in 1x1-meter squares, and maps of architectural material were drawn at the bottom of each level and zone. When discrete depositional events could be identified in the field—for example, the grayish brown fill placed at the edge of the basin in which Structure 1 was built—these contexts were excavated as “zones.” Other deposits whose sources and depositional history were less readily apparent—for example, the matrix of burned sand and daub that fell atop the burned timbers and on the floor of Structure 1 after it collapsed—were excavated in arbitrarily defined “levels.” All of the plow zone deposits in Area A were dry-screened through quarter-inch mesh hardware cloth. All soil from levels and zones below the plow zone in Area A was waterscreened, except for ten-liter flotation samples and one-liter soil samples. Several burned timbers were encased in foam and cardboard and were then taken out of the ground as blocks for preservation and future analysis. Many pieces of burned wood were left in the ground, were carefully covered with landscaping cloth, and were then backfilled with sand and backdirt. Dozens of photos were taken at different stages of these excavations, and the profiles of the excavation trench in Structure 1 were drawn at the end of the field season. These excavations in Structure 1 were a painstaking process, simply because it took a great amount of effort to dig around all the burned wood scattered on the floor.

Burned architectural material from Structure 1 is remarkably well preserved (Figure 6), and it seems likely that the three other burned structures we have so far identified in the area north of the mound at the Berry site are similarly well preserved. The structure was built within an excavated basin. The light grayish brown fill around the edge of the structure seems to represent a deposit placed in the gap between the outer edge of the wall of the structure and the edge of the basin itself. Few artifacts were present in this
Figure 7. Structure 1, unit 888E206, charred wall posts and potsherds. Note deep floor basin outside of (to left of) structure. View to south.

Figure 8. Burke curvilinear complicated stamped vessel fragments from Structure 1.
fill and in the fill covering the center of the structure itself. However, several large fragments of a Burke curvilinear-complicated stamped vessel were found amidst collapsed roof material near the edge of the structure (Figure 7 and 8). A long plank found in Structure 1 is associated with large quantities of what appears to be burned cane—perhaps woven split cane covering a bench of some kind. A notch cut in one of the burned timbers from Structure 1 seems to have been cut with a metal tool, and other timbers have notches that are not commonly associated with aboriginal architecture from this region, although in most respects this structure looks like a native house. Two fragments of iron wire were recovered from the waterscreened deposits from the floor of the structure. Both of these resemble the type of wire employed for chain mail.

Although the structure was built in an aboriginal style, it may have housed Spanish soldiers, and Spaniards may have been involved in building or renovating the structure itself.

Although we have not found many postholes in the area outside the edge of this structure, excavation squares dug in areas east and southeast of the structure in 2002 did reveal the presence of some postholes, including an arc of double postholes seven meters southeast of Structure 1 itself. These postholes may well represent a section of a structure, although a very different kind of structure than that represented by structures 1 and 3. The significance of postholes in this part of the site is an unresolved issue, and we did not explore it any further in the field in 2003.

Area B (Figure 9) refers to excavation squares in the vicinity of Structure 2 (Best and Rodning 2003). One of our goals in Area B was to expose and to excavate features and postholes near the structure itself—we completed excavations of one feature and exposed several others. Another of our goals in Area B was to excavate squares west of the structure itself where gradiometer surveys had detected anomalies that we thought might
Figure 9
be remnants of a palisade or perhaps a series of pit features—we found neither.

Following our standard practice, plow zone deposits were removed with shovels, in 2x2-meter squares, and sifted through quarter-inch mesh screens. Other levels encountered between the plow zone and subsoil were excavated and sifted separately. We identified deposits between the most recent plow zone and the top of subsoil in several squares in Area B as “Zone 4.” This layer, the top of bottom of which were clearly visible in profile view but were more difficult to see in plan view while excavating these squares, comprised brown sand that was darker and more compact than the loose grayish brown sandy loam present in the most recent plow zone. We had initially thought that this “Zone 4” was the same zone that was so designated in 1986, and which were-exposed in Area D in 2003. This assumption proved incorrect. When we recognized this error, by comparing profiles in excavation squares in areas B and D, we began referring to the level of dark brown compact matrix between plow zone and subsoil in Area B as Level 2. Plow scars are visible at the top of Level 2, which may represent an older plow zone that is less disturbed than the most recent plow zone. The tops of some features were also visible at or near the top of Level 2, and we dug through this level very carefully with flat shovels and trowels to find the top of the yellowish brown subsoil and the edges of features intrusive into subsoil. After we had finished excavations of the plow zone and Level 2 in these excavation squares, we took photographs, drew plan view maps, and drew the profile of one selected profile wall in each square in Area B.

One feature in Area B was excavated in its entirety in 2003 (Feature 25; Figure 10 and 11). The top of Feature 25 looked very much like the top of Feature 23 before these
Figure 10 and 11
bilobed features were excavated. Both had one circular lobe that intersected with an oblong lobe. The uppermost deposit in both features was dark brown sand containing great amounts of charcoal, bone, and artifacts such as potsherds, stone tools, lithic debitage, and pieces of brass, although deposits underneath this uppermost layer varied somewhat from one lobe to another. Artifacts were present in all layers within these features, but by far the greatest concentration of cultural material was found in their uppermost zones. It would seem that these bilobed features, when they were done serving as daub processing pits, storage pits, or some other type of facility, were filled in with several layers of midden and other debris. Once these deposits slumped downward, another layer, rich in artifacts and charcoal, was dumped across the top of both lobes of these features. The circular lobe of Feature 25 had a very hard packed clay surface at its base, with potsherds and pebbles embedded in its bottom surface. This lobe of Feature 25 was later intruded by a posthole, in which was placed a hardened mass of charred maize cobs. One rolled brass bead was found in this feature. An unidentified metal fragment was also found in this feature.

The western half of another feature in Area B, Feature 38, was partially excavated in 2003 (Figure 12 and 13). Feature 38 differed from features 23 and 25 in that it was circular at its top, with what looked like burned posts beside it near its southwestern (Feature 42) and southeastern (Feature 43) corners. The uppermost zone of Feature 38 was a dark brown sandy deposit in which artifacts, animal bone, and charcoal were abundant. Underneath this zone in Feature 38 was a series of lighter brown and gray lenses. We did not reach the bottom of Feature 38 in 2003. We took photos and drew the profile between the western and eastern halves of Feature 38 before backfilling it and the surrounding excavation squares at the end of our field season in 2003. Feature 38 resembles features 13 and 18 in its lenses of gray and brown sand and silt and in the
Figure 12 and 13
apparent presence of one pit underneath the one visible at the top of subsoil. Feature 18, found in the area near the mound and excavated in 1986, is interpreted as the posthole dug to hold a large gaming post, and the array of smaller posts and stakes that supported it, and the top of this posthole corresponds to the bottom of Feature 13 (Moore 2002a:231-232). Feature 13, which was also excavated in 1986, is thought to represent a trash deposit placed in the ground after the removal of the large log post in Feature 18 (Moore 2002a:229-230).

The tops of several other features near the southern and western edges of Structure 2 were exposed and recorded this past year. None of these features has been excavated. Artifacts and charcoal nevertheless seem abundant in all of them. Feature 44 is a circular pit northwest of Feature 38. Features 45 and 46 actually may represent a bilobed feature similar to features 23 and 25. Feature 47 looks like a circular pit similar to Feature 44. However, Feature 47 is truncated by burnt architectural debris near the southwestern corner of Structure 2. Interestingly, Feature 47 seems to have been intruded by Structure 2. Of course, the chronological relationship between Feature 47 and Structure 2 will need to be explored through further excavations. That said, current indications that Feature 47 predates Structure 2 raise the possibility that the feature may have been used in activities related to building this structure.

Excavations in Area C exposed Structure 3 in its entirety (Figures 14, 15, and 16). We first removed backfill from the squares in which plow zone had been excavated during our 2001 and 2002 field seasons. We then excavated and sifted (through quarter-inch mesh) plow zone deposits from other 2x2-meter squares in this area to expose the top of architectural material from this structure in its entirety. A plan view map of Area C was drawn. A strip of gray fill surrounded the darker matrix of burned wood and sand in Structure 3. This deposit probably represents the same kind of fill that was placed at
Figure 14 and 15
Figure 16
the edge of the basin in which Structure 1 was built. Several burned posts are still visible in the ground inside this gray strip around Structure 3, as are wooden timbers that may represent roof members or wall posts, and traces of a narrow entryway are present at the southwestern corner of the structure. Several concentrations of daub are visible inside Structure 3, especially near the middle of the structure, where remnants of a hearth may be present underneath an overburden of the roof material that fell on top of it when the structure collapsed. Structure 3 measures 8.65 meters by 8.65 meters, and auger testing indicates that there are probably 15-20 centimeters of architectural debris between the current depth of our excavations and the floor of the structure itself. Structure 3 fits within the size range of Mississippian domestic houses in the Southeast, although it is at the upper end of that range. Estimates of the sizes of structures 1 and 2, based on measurements between corners that have been exposed during excavations, suggest that they are roughly the same size as Structure 3, between 8 and 9 meters per side.

A large number of chipped stone projectile points was recovered from plow zone deposits in excavation squares above Structure 3. It is interesting to speculate that these arrowheads may have been deposited there as a result of flaming arrows shot at the structure. This impression, however, may simply reflect the greater amount of plow zone excavations that have been done here than in other areas of the site. These arrowheads, moreover, were found in plow zone contexts and are therefore not necessarily associated with the burnt structure at all. Nevertheless, it is worth asking, and exploring through further fieldwork and artifact analysis, how and why these structures were burned down. Meanwhile, and just as intriguing, many of the wrought iron nails and brass artifacts that we have found in plow zone contexts at the site have come from squares in which intact architectural debris is also present.
Area D includes several excavation squares near the southwestern edge of the mound (Figure 17). One of our goals in Area D was to connect the 1986 excavation grid with the grid that we have followed since 2001. Excavation squares here in 2003 were adjacent to excavation squares that were part of Area B as it was so defined during excavations in 1986. The grid in 1986 was oriented to magnetic north. The current grid parallels the field road that runs along the current edge of the site, between the field and the woods along the creek, and our current grid north is roughly 17 degrees west of magnetic north. We succeeded in matching the “old” grid with the “new” grid. Figure 17 shows the alignment of the 1986 and 2003 excavations.

Area D also offered valuable information about the stratigraphy of deposits in the area around the mound (Figure 18). We drew the profiles of several excavation squares in Area D after excavations of the several distinct zones above subsoil were completed. We also re-exposed segments of the western edge of 1986 excavation Area B to compare them to stratigraphic profiles that we have seen in excavation squares in other parts of the site since 2001 (Moore 2002a:214-222).

Excavations in 1986 identified the following stratigraphic zones in this part of the site. Zone 1 includes brown to dark brown sandy loam. Zone 1 is the modern plow zone. Zone 2 is a light grey to light tan sand, probably representing alluvial deposits from the 1914 or 1940 floods, and patches of Zone 2 are also present in several squares in Area B. Zone 3 is a dark brown sandy loam that may have resulted from plowing and erosion of the mound. Zone 4 is a very compact, gritty, and sandy deposit, interpreted as soils that accumulated on and around the mound when the mound was in use. Some plow scars are visible in Zone 4, probably from plows drawn by mules or horses, and the tops of some features and burials are visible at the top of Zone 4, although their edges are often not clearly distinct until they are cut down to the top of subsoil. Zone 5 is a cultural deposit,
currently thought to be related to the construction of the mound, which consists of dark brown to black sandy gravel. Three zones found underneath Zone 5 in several excavation squares dug in 1986 are thought to predate the mound. We certainly do need to learn more about the sources of mound and plow zone deposits identified in Area D in 2003. Given the depth of all these zones in the area adjacent to the mound, up to 50 or 60 centimeters in some squares, and the difficulty of digging through these compact deposits, the trench excavations that will help will help us understand the stratigraphy of the mound will also demand considerable time and effort.

Another of our goals in Area D this year was to re-locate Feature 7 (Figure 19), which was partially exposed in 1986. We were able to expose Feature 7 at the juncture of the old and new grids; the dark brown sandy deposits and the abundant charcoal and fire-cracked rock visible at the top of the feature suggest that it might have been a roasting pit or a storage pit that was filled in with some combination of midden or other debris (Moore 2002a:227). Time constraints prevented us from excavating Feature 7 this year, but waterscreening deposits from the top of Feature 7 yielded several large sherds and pieces of animal bone, as well as charcoal. We exposed the top of a shaft and chamber burial close to Feature 7, but we did not excavate it. We also mapped several large postholes intrusive into subsoil north and northwest of Feature 7, many of which may be part of an arc of postholes identified in 1986 some five feet north of grid coordinate 260R300 (Figure 19; Moore 2002a:218).

Fieldwork in 2001, 2002, and 2003 has largely concentrated on areas north of the mound, where the stratigraphy of excavation squares is much different. Near and above structures 1 and 3, the plow zone consists of very loose sandy loam, and under the plow zone are pits, postholes, and intact remnants of the structures themselves. Near and above structures 2 and 4, the loose sandy plow zone is underlain by darker and more
Figure 18 and 19
compact sediments, which have been disturbed by plowing but less so than the more recent plow zone above it, perhaps because these lower levels were disturbed by horse-drawn rather than more recent tractor-drawn plows. The dark and compact deposits above Structure 4 may actually represent mound fill, either because the structure predates the last stage of the mound, or because plowing and other twentieth-century earthmoving activities have spread mound deposits out beyond the original edges of the sixteenth-century mound itself. The compact dark brown matrix between plow zone and subsoil near Structure 2 is probably not re-deposited mound fill, given its distance from the mound itself, but it does seem to represent an earlier plow zone and has been treated as such in the field. Patches of sandy alluvium, designated as Zone 2, are present as discrete concentrations within these compact dark brown deposits below the plow zone near Structure 2. The loose sandy loam in the modern plow zone is relatively consistent across the area north of the mound where we have concentrated our excavations thus far, and this plow zone is the only deposit above subsoil and the undisturbed remnants of Structure 1, and likewise for Structure 3.

Clearly, we need to learn more about the stratigraphy at the Berry site, in order to better understand the formation of the site itself, and also to clarify the temporal relationship between the mound and the structures and features around it. Learning more about the stratigraphy of different parts of the site of course would also be valuable to understanding the broader geomorphological history of floodplains along Upper Creek such as the alluvial bottomlands in which the Berry site is situated. University of Tennessee archaeologist Sarah Sherwood visited the site this year to collect soil samples from several different contexts. She will be conducting micromorphological and microartifactual analyses of deposits from the floor of Structure 1, which may yield insights into the kinds of activities that took place on that surface. She will also analyze
samples taken from the different zones exposed in stratigraphic profiles in Area D, which may clarify which zones, if any, represent redeposited or intact mound fill, and which may represent soils that formed near the ground surface when the mound was in use.

**Artifacts**

All excavated materials from the 2003 season were washed and catalogued by members of the Warren Wilson College Archaeology crew between August 2003 and March 2004. The distribution of general classes of artifacts is presented in Tables 1-5 representing Areas A, B, C, D, and excavated features. No further analysis of the excavated material has been completed though an analysis of projectile points excavated from 2001 through 2003 is currently underway.

Pending more detailed analysis, it is possible to observe that the overall artifact assemblage remains consistent with materials recovered in 1986, 2001, and 2002. The ceramics consist overwhelmingly of Burke series pottery, although a significant minority of sand-tempered Woodland period pottery has also been recovered. The general assemblage represents the material culture of a 15th to 16th century Burke phase aboriginal occupation. Of particular note, however, is that additional sixteenth century Spanish artifacts were recovered during the 2003 excavation (Table 6). It is also important to note that no other diagnostic European materials were recovered. The recovery of additional Spanish artifacts adds more weight to our interpretation of the burned buildings as a part of Fort San Juan.
Table 1
Table 2
Table 3
Table 4
Table 5 and 6
Conclusion

Currently, we know that the Berry site was a large town with an earthen mound (Figure 21; Beck and Moore 2002; Moore and Beck 2000), that it was the capital town of a Mississippian chiefdom during the 1500s (Beck and Moore 2002), that it was the site of a Spanish fort and frontier settlement in the 1560s (Beck 2002; Moore and Beck 1994; Worth 1994), that at least four burnt structures and several features are present in the area north of the mound at the Berry site (Beck and Hargrove 2001; Beck and Ketron 2003; Best and Rodning 2002; Moore and Rodning 2001; Rodning, Beck, and Moore 2002), and that archaeological data from this and other sites in the surrounding region can give us unique windows on the native cultural landscape of the sixteenth century and the nature of the earliest encounters between Europeans and native chiefdoms in the upper Catawba Valley in western North Carolina. Native population density was quite high in this region during the fifteenth and sixteenth centuries, but it was all but abandoned by the early seventeenth century (Moore 2002a). Why was the upper Catawba Valley abandoned in the 1600s? Were native communities impacted by epidemic diseases introduced by Europeans, were they displaced by conflicts spurred by the presence of Europeans, or were they drawn downriver to new towns and villages that were forming to take advantage of trade relations with South Carolina colonists in the 1600s? The native settlement at Berry was positioned along trade routes that were probably critical to the vitality of the Mississippian chiefdom centered at this town, and even before Europeans arrived in southeastern North America the upper Catawba Valley represented a cultural frontier of sorts between Mississippian chiefdoms and the Piedmont village tribes located in areas to the east and northeast (Moore 2002b). What was life like along this cultural frontier before European contact? And how did both Europeans and natives respond to
each other, interact with each other, and adapt to the new frontier that formed as Spaniards began exploring the Southeast?

In the future we plan to continue to expose areas between structures at the northern end of the Berry site, in the interest of learning more about the broader layout of the settlement of which these four burnt structures were a part, and to begin excavations at other sites representing settlements that were part of a regional chiefdom centered at the Berry site itself. One site that is a candidate for test excavations next year is located on the Erwin family farm, located on Warrior Fork some seven miles downstream from Berry. Other candidates for test excavations in the near future are the several known sites on land near the confluence of Irish and Upper creeks, which together form Warrior Fork. Furthermore, we also hope to begin identifying sites along the neighboring Johns River, some one to two miles east of Upper Creek, where we can begin studying native settlements that were contemporary with the major town at Berry and the villages and farmsteads associated with it. Meanwhile, further excavations at the Berry site will continue to shed light onto the nature of early encounters and interactions between native chiefdoms in the Southeast and European explorers and colonists.

We have devoted considerable effort to sharing what we have learned with members of the public. Our web site (http://www.warren-wilson.edu/~arch/) includes daily logs about what we have done in the field, descriptions and photos of what we have found, and broader overviews of what these finds contribute to archaeological knowledge in western North Carolina. Our public open houses at the Berry site and on the Western Piedmont Community College campus in Morganton have drawn hundreds of people from Morganton, Asheville, Charlotte, Winston-Salem, Raleigh, Durham, Chapel Hill, and other parts of North Carolina.
We have also been committed to involving members of the public as participants in our project. Many members of the local community participate in our project as field school students through Western Piedmont Community College. Several of these field school participants are schoolteachers who are updating their teaching certification. Others are high school and community college students who are interested in transferring to other colleges and universities after finishing coursework and degree programs at Western Piedmont. Others are simply interested in learning about the past while also learning archaeological field techniques.

The involvement and interest of people from Morganton and other communities is exciting and rewarding for us, and we are grateful for active support of our excavations at Berry from many local residents. We hope that our research enhances local knowledge about native and early European history in the area. We also hope that it highlights the need to preserve and protect archaeological sites that may be impacted by growth and development in Morganton and the surrounding area. Floodplain settings are good candidates for the locations of other sites, including major towns like Berry as well as smaller villages and farmsteads. We do not yet know what these outlying settlements looked like or how long they were occupied. We also have not been able to conduct fieldwork at other large sites in the area that may be towns comparable to and contemporary with the Berry site. Comprehensive plans for development in Morganton should include plans for archaeological investigations of, and in some cases the protection of, sites that still hold valuable clues about the native cultural landscape and the nature of interactions between native people and Spanish explorers in the sixteenth century.
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Appendix A. Historical and Archaeological Background to Fort San Juan and Joara at the Berry Site

[Note: This section has been prepared specifically for use for future exhibits and interpretive efforts by the City of Morganton, the Burke County History Museum, and the Historic Burke Foundation.]

During the 1500's, Europe's colonial powers--England, France, and Spain--began launching their first campaigns in North America. Of these nations, Spain was by far the most ambitious in its early efforts to explore and colonize this New World. By the time that English colonists founded Jamestown in 1607, Spain's presence in what is now the southeastern United States had spanned a period of more than eighty years. Our ongoing archaeological research in Burke County, North Carolina, promises to shed new light on this often-neglected time in American history, a time that witnessed the first sustained contact between Europe and the Native peoples of North America.

Spain's earliest efforts to establish a permanent settlement on the North American continent were unmitigated failures. Three expeditions to colonize the Gulf and Atlantic coasts, mounted by Juan Ponce de Leon (1521), Lucas Vasquez de Ayllon (1526), and Panfilo de Narvaez (1528), all met with the disastrous loss of property and lives--both Ayllon and Narvaez perished in their respective attempts. In 1532, Hernando Pizarro and a small contingent of Spanish soldiers climbed high into the interior of South America's Andes Mountains and conquered the fabulously wealthy Inka Empire; other Spanish explorers set their sights on the interior of North America and the riches they imagined might also be found there.

In 1539, Hernando de Soto set sail from Cuba with an army of over 600 men, 200 horses, and a thousand pigs in an expedition of conquest. Soto had become quite wealthy in his earlier service as one of Pizarro's lieutenants during the conquest of the Inka, but looked now for his own lands and empires to claim. Soto and his force landed at Tampa Bay on March 25, 1539,
and proceeded to spend most of the next four years wandering from native town to native town throughout the interior Southeast, traversing through what are now the states of Florida, Georgia, South Carolina, North Carolina, Tennessee, Alabama, Mississippi, Arkansas, Texas, and Louisiana. In the end, no more than half of Soto's army survived the expedition, and Soto himself died of a fever on the banks of the Mississippi River in 1542, joining the ranks of other expedition leaders who had perished in search of their fortunes in the American Southeast.

After yet another failed colonization effort, that of the Tristan de Luna expedition of 1559-1560, Pedro Menendez de Aviles finally succeeded in founding a pair of Spanish settlements along the Atlantic coast: St. Augustine, founded in September 1565 in what is now Florida; and Santa Elena, founded in April 1566 on Parris Island, near present-day Beaufort, South Carolina. Santa Elena was to be the principal city of Menendez' colonial aspirations. When King Philip II of Spain learned of Menendez' success, he commanded that reinforcements be sent to support the fledgling colony. On July 18, 1566, Captain Juan Pardo arrived at Santa Elena with a company of 250 soldiers and began the task of fortifying the settlement. However, as the Santa Elena colony was ill-prepared to feed such a large contingent of men for very long, Menendez ordered Pardo to prepare half of his army for an expedition into the interior lands behind the Atlantic coast. Pardo was to explore the region, claim the land for Spain while pacifying the local Indians, and find a route from Santa Elena to Spanish silver mines at Zacatecas in northern Mexico. Pardo departed from Santa Elena with a company of 125 men on December 1, 1566.

In early January 1567, Pardo and his army arrived at a large Indian town named Joara. Documentary and archaeological evidence suggest that Joara was located along the upper Catawba River in what is now western North Carolina. Pardo described Joara as "located at the
foot of a range of mountains, surrounded by rivers." Hernando de Soto seems to have visited this same town briefly in 1540, though the written accounts from his expedition refer to the town as Xuala. At Joara, Pardo stated: "I found a large number of Indians and caciques...I made a fort where Boyano, my sergeant, and certain soldiers remained with their munitions of powder, matchcord, balls, and maize to eat." Pardo renamed this town Cuenca, after his own native city in Spain, then assigned a contingent of thirty men to defend the fort, named San Juan, and to occupy the town.

Earlier expeditions into the North American interior had constructed short-term, seasonal encampments: Soto's winter encampments near modern Tallahassee, Florida and in northwest Mississippi date to 1539 and 1541, respectively; Jacque Cartier's two winter forts near present-day Montreal, Canada date to 1535 and 1541. Also, members of the aforementioned Luna expedition had occupied a native town on the Alabama River for several months in 1560. Pardo's Cuenca and Fort San Juan, however, represent a very different kind of undertaking. Juan Pardo founded Cuenca and Fort San Juan not as seasonal encampments, nor as temporary lodgings in a native town, but rather with the specific intent of permanently expanding the Santa Elena colony deep into the frontiers of Spanish La Florida. As such, we suggest that the "noble and loyal city of Cuenca and fort of San Juan" represent the earliest European settlement in the interior of what is now the United States.

Pardo returned to Santa Elena on March 7, 1567. Shortly thereafter, he received a letter from his sergeant at Fort San Juan, Hernando Moyano, who claimed to have battled with a chief named Chisca, and continued that he would press on beyond Joara if ordered to do so. Before Pardo's orders could arrive, Moyano was threatened by another chief in the mountains who vowed to eat the Spaniards, as well as the sergeant's dog. Departing at once from the fort,
Moyano and nineteen Spaniards, accompanied by a contingent of warriors from Joara, traveled for four days over the mountains, where they were surprised to find the mountain chief's town enclosed by a very high wooden wall. Moyano claimed to have burned the town and killed fifteen hundred Indians in battle, though this figure is probably an exaggeration. Moyano continued beyond this town into present-day eastern Tennessee, and at the Indian town of Chiaha he built a fort and awaited Pardo's return.

On September 1, 1567, four months after Moyano arrived at Chiaha, Pardo again set forth from Santa Elena, arriving at Joara (i.e., Cuenca) three weeks later on September 24. Here, he learned that Moyano was under siege in the mountains and departed at once for Chiaha. After traveling through mountains for several days, he arrived at this town to find Moyano and his men "hard pressed," but safe. On October 13, Pardo left Chiaha to continue exploring the Tennessee Valley. Three days later, at the town of Satapo, he was told of a plot to ambush the company. Wisely, Pardo decided to turn back. At Chiaha, he and his men improved Moyano's fort and christened it Fort San Pedro. At an Indian town named Cauchi, probably on the upper Pigeon River in western North Carolina, they built another fort, San Pablo. On November 6, they returned to "the city of Cuenca and fort of San Juan which in the Indian tongue is called Joara, where he made a halt and remained twenty days because the people of his company were tired and poorly provided, that they might have a place to rest and to provide themselves." After having garrisoned Fort San Juan with thirty men, Pardo departed Joara, and along his return to Santa Elena he built small forts at three other Indian towns, bringing the total number of forts to six; it is clear, however, that Pardo considered Cuenca and its Fort San Juan to be the most important settlement in the interior.
By May of 1568, news reached Santa Elena that Indians had attacked all of the interior forts, and that all had fallen. Only one Spanish soldier, Juan Martin de Badajoz, is believed to have escaped the destruction. Although it is not known whether all of the forts were attacked at the same time, it is clear that none remained by June 1568. Several factors may have had a role in the Indians' decision to attack the forts, but two stand out: Spanish demands for food, and Spanish improprieties with Indian women. With regard to the latter, Pardo had specifically instructed soldiers at one settlement not to bring any women into the fort at night. In any event, 130 soldiers and all six of the forts were lost, and with them Spain's only attempt to colonize the northern interior of La Florida.

The Pardo documents themselves offer us tantalizingly few clues as to what kinds of material correlates we might find in association with the archaeological remains of Fort San Juan. The documents do, however, indicate two general kinds of structures the company used at Joara: the fort itself, and houses where the soldiers may have lived. Neither Pardo nor Juan de la Bandera, his scribe, provided a physical description of the fort, though Bandera did describe the construction of Pardo's fortification at Guatari, Fort Santiago. Pardo built Fort Santiago after his departure from Joara in November, 1567. Afraid that he and his men would be recalled to Santa Elena, Bandera noted that Pardo spent two days at Guatari building two "bastardos," which Hudson refers to as "bastions of earth." When no summons came, Pardo spent seventeen more days building four tall "cavalleros" of thick wood and earth, and a wall of high poles and earth. Clearly, the construction of Fort Santiago involved a considerable amount of earth and wood, including bastions and a tall palisade; given that Fort San Juan was to be the principal fort in the interior, we would expect Pardo to have invested no less effort in its construction.
Bandera also made note of where the Indians built houses for the Spanish soldiers. On his first expedition, Pardo instructed the leaders of several native towns, including Joara, to construct houses and to lay up stores of grain for the soldiers to use when traveling on the planned road from Santa Elena across the Piedmont and mountains. When Pardo arrived at Joara on his second expedition, Bandera noted that he (quote) "found built a new house of wood with a large elevated room full of maize, which the cacique of the village, who is called Joada Mico, had built by the command of the captain." At several towns where Pardo ordered houses built, Bandera noted that the structures were large, and one suspects that they were considered large in relation to the Indians' own houses.

These houses were built for the Spaniards at different native towns, and we would expect these buildings to reflect native construction techniques and technologies. Bandera specifically described the house that Pardo found at Guatari, noting that its interior was completely covered with mats, and that its floor plan was circular. Hudson suggests that Bandera's particular attention to the round floor plan at Guatari may imply that houses built for the Spaniards in other native towns were square or rectangular. This is not surprising, given Guatari's location on the western edge of the Piedmont Siouan tradition, marked by circular house plans; Burke and Pisgah populations to the west of Guatari--the area where we believe Joara was located--favored square houses.

At Joara, Pardo built Fort San Juan before instructing Joara Mico to build the soldiers' house; we do not know if this house at Joara--or at any of the other towns with both a house and a fort--was built inside or outside the fortifications; Fort San Juan could have looked like early James Fort, with one or more houses built inside the fort, or it could have looked like Santa Elena, where forts were spatially separate from most of the habitation areas. One detail from the
documents may suggest the latter example is more appropriate for Fort San Juan. Each of the forts at Santa Elena carried a place name distinct from that of the town itself--fort and town were distinct in name and in space. Likewise, Pardo renamed all but one of the native towns where he built a fort; all were renamed after cities in Spain. As I've noted, Joara was renamed after Pardo's home of Cuenca, Guatari after Salamanca, Canos after Toledo, etc. The construction of a fort and conferral of a Spanish place name seems to have transformed each of these native towns into a Spanish colony--or at least that seems to have been Pardo's intent. The distinction between Cuenca the town and San Juan the fort--and the similar distinction between other towns and forts--suggests that Pardo followed the Santa Elena example, and that the spatial divide between town and fort may have been carried from Santa Elena into the interior. Thus, we might expect to find Spanish habitation areas outside Fort San Juan.

Among the Pardo documents are lists of the supplies that Pardo left at each of the interior forts; these lists may provide one of the best sources of information regarding the material correlates of Fort San Juan. As John Worth has pointed out, most of the artifact classes on these lists are of items that never entered into Spanish-native trade networks, so their presence on archaeological sites in the interior may be taken as strong evidence of extended Spanish presence, rather than short-term contact. During his two expeditions, Pardo issued the following military and construction supplies for Fort San Juan: 235 lbs of arquebus powder; 201 lbs of matchcord; 235 lbs of lead; 4 crossbows; 240 crossbow bolts; 34 lbs of nails; 42 chisels; 6 shovels; 4 mattocks; 4 picks; 2 socketed axes; and 4 iron wedges. In addition to these supplies left at the fort, Pardo is known to have carried, during the two expeditions, 878 lbs of biscuit and 72 liters of wine for the provisioning of his men; while the biscuit was probably carried in linen sacks unlikely to be recovered in the archaeological record, the wine was almost certainly carried
in the ceramic containers archaeologists usually refer to as olive jars—the typical vessel form colonial Spaniards used for transport and storage. We may thus expect the archaeological sites of Fort San Juan and Joara to include certain artifact classes that did not enter into documented Spanish-native trade networks and that are very uncommon, or altogether absent, from other 16th sites—especially lead shot, nails, and Spanish ceramics.

Our research strongly suggests that the Berry site in Burke County, North Carolina is the native town of Joara, location of Pardo's Cuenca and Fort San Juan. Since 1986, we have discovered numerous Spanish artifacts at this site, including 15 fragments from four different Olive Jars, 1 sherd from a Caparra Blue majolica drug jar—found only on New World sites that date from 1492 to 1600—three brass aglets or lacing tips similar to those recovered at Santa Elena, lead shot, quartered lead shot, molten lead sprue, and several wrought iron nails, one of which is unmodified—significantly, of all the interior forts, only San Juan was supplied with nails. The collection of sixteenth-century Spanish artifacts we have recovered from Berry is distinct from assemblages of Spanish material recovered at other sites in the interior Southeast: only four other sites in the interior have yielded fragments of Spanish pottery, and one of these is the Governor Martin site in Tallahassee, Florida, location of Soto's aforementioned winter encampment in 1539. The three other sites have each yielded but a single sherd of Spanish pottery. Significantly, these three sherds had each been altered, presumably by Indians, into display pieces such as ear spools or gaming disks. That none of the Spanish ceramics we have found at the Berry site show sign of such alteration suggests that Spaniards discarded these sherds as utilitarian debris. The only sixteenth-century site in the interior with a similar collection of Spanish artifacts.
The Berry site covers nearly 12 acres, suggesting that Joara was one of the largest native towns in North Carolina during the sixteenth century. Spanish artifacts, however, are restricted to a 1.5 acre section north of the mound; given this distribution of Spanish artifacts, we have focused our recent investigations in this area of the site. Our research in this area—including both magnetometer surveys and extensive excavations—have revealed at least four burned buildings that form a distinct, open-sided enclosure. All four of the buildings are rectangular, measure about eight meters on a side, and while unusually large, appear to have been built in a style typical of local, Native American structures. Our excavations suggest that all of these buildings were constructed at about the same time, used for a short period, then destroyed by fire.

We believe that these buildings may represent the Spanish settlement of Cuenca, and that these are perhaps the houses that quartered Pardo's soldiers stationed at Fort San Juan. That all four of the structures were built in a typical Indian style is not surprising: documents from Pardo's second expedition specifically note that the Indians of Joara built a large house for his army, and in the time that Pardo spent at this town it is possible that the inhabitants of Joara helped to build additional structures. On the other hand, it is possible that Pardo's men simply took over, or were offered, several Indian houses that were already standing at the time of the expeditions. That all four of the buildings we have so far recovered were burned may serve as a chilling testament to how relations between the Spaniards and the people of Joara ended tumultuously in the Spring of 1568. Santa Elena itself was finally abandoned in 1587, two years after the founding of Raleigh's famed Roanoke "Lost" Colony. For the next two centuries, St. Augustine would remain Spain's last toehold against the prolonged and ultimately successful French and English incursions into the North American Southeast.
### Appendix B. List of Features at 31BK22

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<td>29</td>
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<td>in Str. 1</td>
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</tr>
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<td>30</td>
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### Appendix B. List of Features at 31BK22 (continued)

<table>
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<tr>
<th>Feature</th>
<th>Square</th>
<th>Center</th>
<th>Date</th>
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<td>31</td>
<td>N890E194</td>
<td>N892E193</td>
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<td>33</td>
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<td>amorphous trench?</td>
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<td>2003</td>
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<td>47</td>
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<td>circular pit</td>
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### Appendix C. List of Burials at 31BK22

<table>
<thead>
<tr>
<th>Burial</th>
<th>Square Center</th>
<th>Identified</th>
<th>Excavated</th>
<th>Type</th>
<th>Comment</th>
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<tr>
<td>1</td>
<td>270R310 271R312</td>
<td>1986</td>
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<td>shaft and chamber</td>
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<td>1986</td>
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<td>2002</td>
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<td></td>
<td>at bottom of Fea. 23</td>
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<tr>
<td></td>
<td></td>
<td>2003</td>
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### Appendix D. Identified Structures at 31BK22

<table>
<thead>
<tr>
<th>Structure</th>
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<tr>
<td>1</td>
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<td>8-9 m</td>
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<td>?</td>
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<td>8-9 m</td>
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<td>8.65 m</td>
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<td>burned</td>
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</tbody>
</table>
## Appendix E. Participants in the 2003 Berry site excavations

### Principal Investigators
- David Moore, Warren Wilson College
- Rob Beck, Northwestern University
- Chris Rodning, UNC-Chapel Hill

### Crew
- Megan Best
- Karla Evans
- Ellie Haywood
- Crickett Hefner
- Caroline Ketron
- James Lang
- Scott Ashcraft
- Mike Patton

### Consultants
- Heather Lapham, Southern Illinois University, Carbondale
- Myra Moore, University of Tennessee at Knoxville
- Gerald Schroedl, University of Tennessee at Knoxville
- Sarah Sherwood, University of Tennessee at Knoxville

### Students

#### Warren Wilson College
- (for credit students)
  - Matthew Biggers
  - Rachel Briggs
  - Andrew Jubera
  - Laurel Key
  - Joanna Vasek
  - Cheryl Geiger
  - Michelle Mockbee
  - Daitsuke Eto
  - Natasha Boeri
- (non-credit students)
  - Brandon Bates
  - Wesley Burnet
  - Kelley Coffey
  - Hal and Cynthia Curry
  - Lorie Hansen
  - Lionel, Megan, Ethan, and Owen Jones
  - Doug Rader
  - Jessica Smeeks
  - Judy Teele
  - Linda Wall
  - Keith Whitesides

#### Western Piedmont Community College
- Mary Charlotte Safford
- Bethany Alexandre
- Amelia Bolick
- Joshua Carswell
- Marion Crombie
- Laura Elofson
- Herbert Gwyn
- Molly Hemstreet
- Susan Houck
- Carole Hovland
- Donna Hoyle
- Jenny Jenkins
- Christina Keller
- Amber Lail
- Kristin Lail
- Johnny Lee
- Renee Lewis
- Linda Massey
- Chevailla Mathis
- Seth McDaniels
- Brian Mills
- Brian Mull
- John Nash
- Patricia Pardue
- Jared N. Patton
- Jared A. Patton
- Rachel Pierson
- Vincent Revilla
- Jamie Sigmon
- Dewayne Singley
- Rebekah Sutton
- Elizabeth Stuenkel
- Tiffany Tallent
- Linda Wagner
- Gail Whisenant
- Vivian Wilson
- Angela Wright
- Roddy Young
- Ashleigh Zolinger