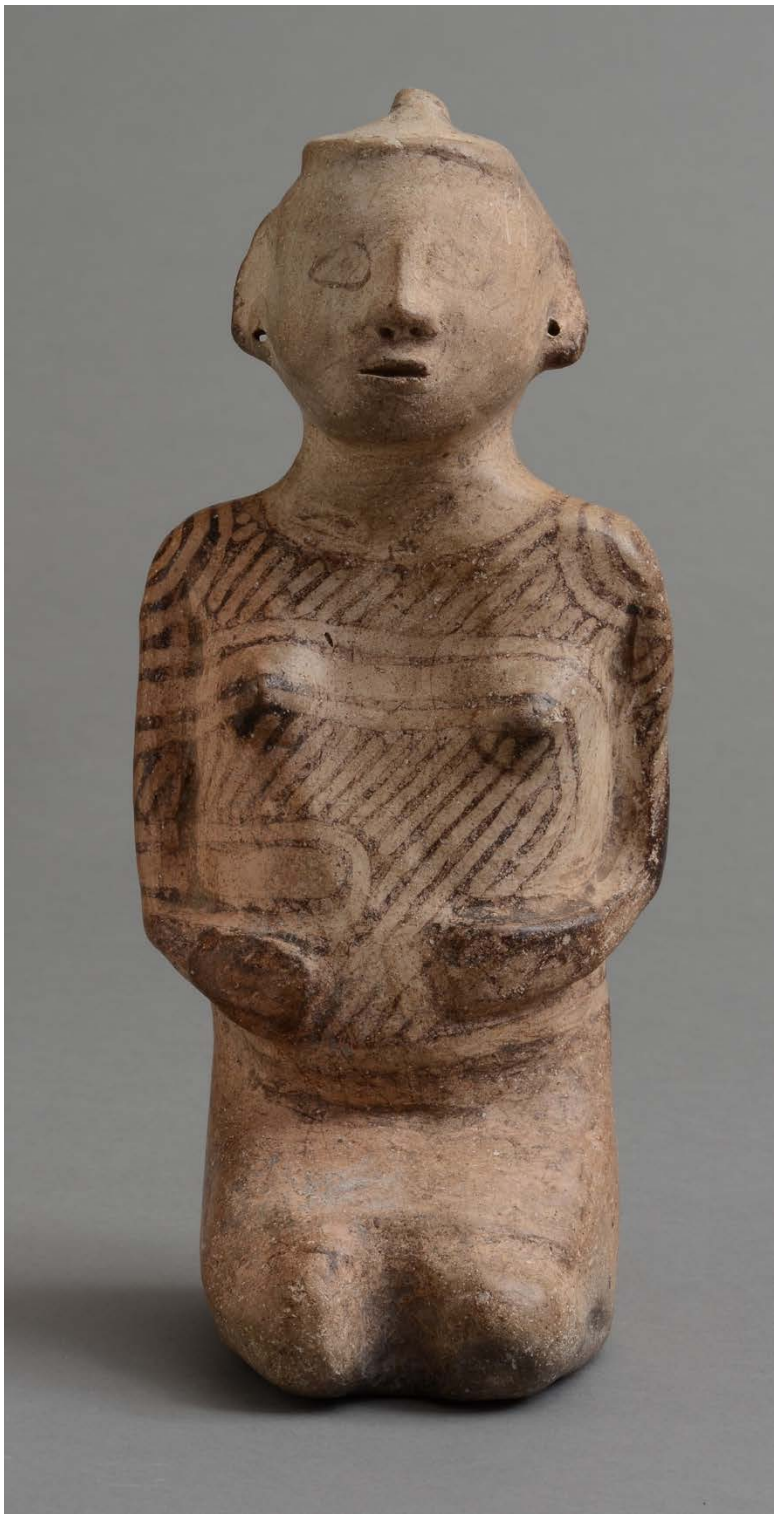
# TENNESSEE ARCHAEOLOGY

Volume 10 Spring 2019 Number 1



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# TENNESSEE ARCHAEOLOGY

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*On the Cover:* Negative-painted female effigy bottle, Smith County, Tennessee © David H. Dye

# EDITORS CORNER

## Kevin E. Smith and Michael C. Moore

We are pleased to present the first issue of Volume 10 of *Tennessee Archaeology*. We'll save a retrospective on the first ten volumes (and first 15 years) for the next Editors Corner, but for now, as always, we appreciate the support of the contributors and reviewers who have helped to create an increasingly widely respected peer-reviewed open-access journal over that period. As we peruse articles in regional and national journals and books issued by major academic publishers, the number of article citations from the journal continues to increase – which certainly speaks to the value of the primary data published in this journal. In this issue, Robert V. Sharp offers the first major published synthesis of many years of research on the negative-painted female effigy bottles from Tennessee. That paper clearly underlines the value of curated collections used in conjunction with modern archaeological research to open new interpretive doors on Tennessee prehistory. In the second article, Butler and Parker revisit curated professional archaeological collections from the 1970s to examine for the first time the botanical assemblage from Yearwood – an important Middle Woodland site in southern Middle Tennessee. Finally, we include the third research report from the Cave Archaeology Research Team at the University of Tennessee on the cave and open-air rock art of Tennessee. Simek et al. (this issue) includes an annotated version of their report presented at the 2009 Annual Meeting on Current Research in Tennessee Archaeology.

**FIGURE 1. Robert Jerald Ledbetter (*Courtesy, Society for Georgia Archaeology*).**

We also take the opportunity to recognize the passing since our last issue of two valued contributors to archaeology who began their early careers in Tennessee and then moved on to successful work in Arkansas and Georgia. We extend our condolences to their family, friends, and colleagues. They will be missed.

**Robert Jerald Ledbetter (15 Oct 1947-17 May 2018)** was born in Livingston, Tennessee but then moved to Jackson, Tennessee with his family soon thereafter, where Jerald spent the remainder of his youth (Figure 1). He received a B.S. in Biology from Union University and maintained a lifelong love of the natural world – especially birds. He spent his professional life working as an archaeologist for over four decades – learning field techniques in Tennessee. Among his Tennessee work was as an employee of the Division of Archaeology on the Fort Loudoun project from 1975-1976 (Fort Loudoun Report 2010).

In 1977, he relocated as an archaeologist for the University of Georgia. After gaining a wide variety of professional experiences, including in Oaxaca, Mexico, he joined Southeastern Archaeological Services (Athens, Georgia) in 1983, where he directed projects and authored reports until his death.

Jerald was known for his pioneering work using a backhoe for archaeological survey and his professional dedication to the study of Paleoindian and Archaic peoples of the Southeast. Foremost among his remembered talents was his patience for mentoring and encouraging young archaeologists. He was a quiet, gentle person who gave freely of his time and knowledge to help others. Memorial donations can be made in his honor to the Society for Georgia Archaeology (Society for Georgia Archaeology obituary and memorial donations, 2018).

**Jamie Chad Brandon (21 Jun 1971-24 Dec 2018)** died after a brief but courageous battle with cancer. Brandon's career in archaeology spanned three decades and involved fieldwork throughout the Southeast. He focused on a wide range of topics, including adaptation to environmental change, land use through time, ethnicity, race relations and historical memory in the pre-industrial South.

In addition to producing an impressive record of scholarly research, he is remembered for his devotion to outreach activities to the general public about archaeological discoveries and why they are important to understanding modern society. He was also a popular teacher and mentored a host of students through internships, theses and dissertation projects.

While pursuing his bachelor's degree in anthropology from the University of Memphis in the early 1990s, he also gathered field experience working for the Tennessee Division of Archaeology on the West Tennessee Tributaries Project and at the Oliver site (West Tennessee Tributaries report 1994). He also worked in contract archaeology for private firms in West and Middle Tennessee (Figure 2).

**FIGURE 2. Jamie Chad Brandon working on test excavations in June 1993 at Bledsoe's Station, Sumner County, Tennessee (*Bledsoe's Fort Archaeological Project*).**

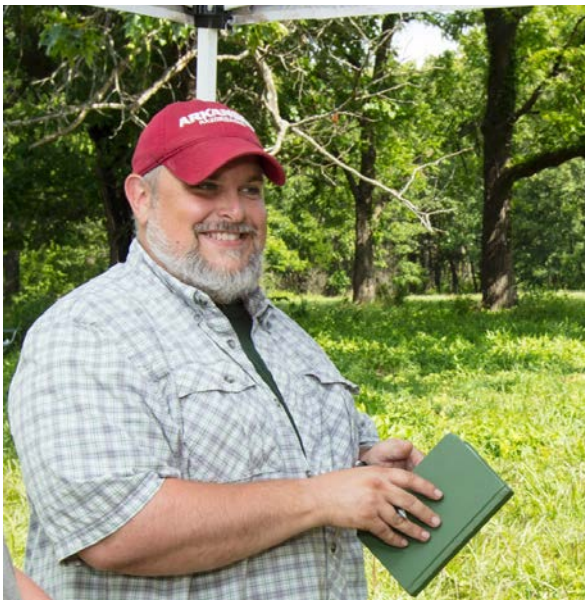

**FIGURE 3. Jamie Chad Brandon at Pea Ridge National Military Park, Summer 2017 (*Courtesy, University Relations, University of Arkansas*).**

After graduating from the University of Memphis, Brandon moved to Fayetteville to enroll at the University of Arkansas while working for the Arkansas Archeological Survey. He earned his master's in 1999, while also working on several Survey projects, including excavations at the 19th century Van Winkle Mill, which became the subject of his 2004 doctoral dissertation at the University of Texas, Austin.

Returning to Arkansas, Brandon served as research station archaeologist at Southern Arkansas University in Magnolia from 2006 through 2014, when he transferred to Fayetteville to take the research station archaeologist post at the University of Arkansas (Figure 3)

**FIGURE 4. Jesse Tune, John Broster, and Shane Miller (right) at the 2013 Southeastern Archaeological Conference in Tampa, Florida (*Miller and Tune 2016, Figure 1*).**

An enduring legacy of his efforts along with spouse Lydia Reese to report on important collections curated by the Survey and University of Arkansas Museum from Ozark bluff shelter sites is the website *Bluff Shelters of the Arkansas Ozarks* (Bluff Shelters of the Arkansas Ozarks).

We are also pleased to report that several Tennessee archaeologists received major state and national awards in the course of the past year. In November 2018 at the 75th Annual Meeting of the Southeastern Archaeological Conference (SEAC) in Augusta, Georgia, two individuals received awards of note. **D. Shane Miller** (Figure 4) was awarded the **C.B. Moore Award** by the Southeastern Archaeological Conference. The award was established in 1990 by members of the Lower Mississippi Survey under the leadership of Stephen Williams to recognize "Excellence in archaeology by a young scholar in Southeastern archaeology or associated studies." In recognition of his or her accomplishment, the C.B. Moore award winner gets to keep, for the following year, a replica of the Moundville Cat Pipe, which was found by Moore and the original of which resides in the Peabody Museum at Harvard (Figure 5).

Shane earned his BA and MA from the Department of Anthropology at the University of Tennessee, Knoxville, and his PhD from the University of Arizona in 2014. Now an assistant professor in the Department of Anthropology and Middle Eastern Cultures at Mississippi State University, Shane has been exploring the Ice Age colonization of the Americas, origins of agriculture in eastern North America, and the intersection of lithic technology, GIS, and geoarchaeology as

**FIGURE 5. The replica of the Moundville Cat Pipe (with another Tennessee archaeologist, Kandi Hollenbach of the University of Tennessee, Knoxville, who received the award in 2012; *Kevin E. Smith*).**

ways to explore past human behavior in the Southeast. Along with Jesse Tune, Shane was a guest editor with Jesse Tune of Volume 8 of *Tennessee Archaeology*, honoring the contributions of John B. Broster, and has co-authored several articles in our journal (Volume 6; Volume 8).

At the same SEAC meeting in 2018, **David G. Anderson** (Figures 6-7), a professor in the Department of Anthropology at the University of Tennessee, Knoxville, since 2004, received a **SEAC Lifetime Achievement Award**. David worked in CRM archaeology from 1974 to 1988. His 1979 MA thesis at the University of Arkansas examined the excavation methods used at the Zebree site in Arkansas. His 1990 dissertation at the University of Michigan focused on "cycling" -- the temporal and spatial patterns in the Mississippian settlement of Savannah River chiefdoms (later published as *The Savannah River Chiefdoms: Political Change in the Late Prehistoric Southeast,* University of Alabama Press, Tuscaloosa, 1994). David was the first recipient of the C.B. Moore Award from SEAC in 1990.

**FIGURE 6. David G. Anderson closing out his term as President of the Tennessee Council for Professional Archaeology at the *Current Research in Tennessee Archaeology* meeting, Nashville, January 2008 (*Kevin E. Smith*).**

Before joining UT, he had a distinguished career with the National Park Service starting in 1988 and culminating with the excavation of Mound A at the Shiloh Mounds in Hardin County,

Tennessee. He is also well known as the guiding force behind the Paleoindian Database of the Americas – and has co-authored several articles in *Tennessee Archaeology,* including "Making a Difference: John B. Broster and Paleoindian Archaeology in Tennessee" (Volume 6; Volume 8).

**FIGURE 7. Two of our featured award recipients, David Anderson and Nick Honerkamp at the *Current Research in Tennessee Archaeology* meeting, Nashville, January 2014 (*Kevin E. Smith*).**

In January, 2019, **Nick Honerkamp** (Figures 7-8) received a **Professional Career Achievement Award** from the Tennessee Council for Professional Archaeology, recognizing his 38 years of service to Tennessee archaeology. In 1980, Nick was hired as the second director of the Jeffrey L. Brown Institute of Archaeology and professor at the University of Tennessee, Chattanooga, where he remained until his retirement in December 2018. Working primarily in historical archaeology, Honerkamp is perhaps best known in Tennessee for his work on industrial sites in the Chattanooga area, including the Union Railyards and Bluff Furnace. He also contributed one of the first articles to *Tennessee Archaeology* on his excavations on the Samuel Doak plantation in Greene County, Tennessee (Volume 1, Issue 2). In addition to his service as an archaeologist and professor, Nick also contributed his musical talents several times to meetings of the Southeastern Archaeological Conference in Tennessee (and elsewhere) and Society for Historical Archaeology meetings. Most recently, The Nick and The Pool played for the dance at SEAC Nashville 2015.

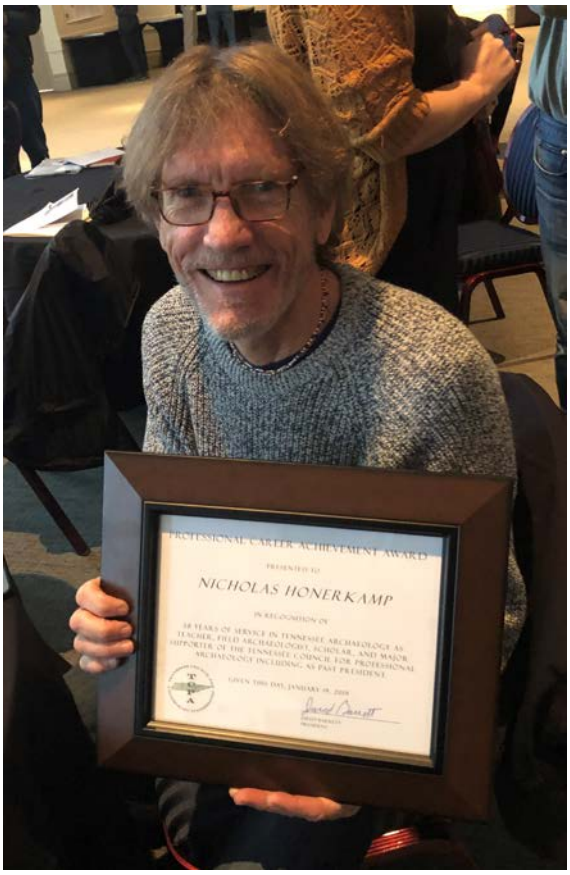


**FIGURE 8. Nick Honerkamp with his award, *Current Research in Tennessee Archaeology* meeting, Murfreesboro, January 2019 (*Kevin E. Smith*).**

Most recently in April 2019, **Meagan Dennison** (Figure 9), PhD candidate in

anthropology (zooarchaeology) at the University of Tennessee Knoxville, received the **Student Paper Award** at the Society for American Archaeology meetings in Albuquerque, New Mexico. Her paper titled "Stable-Isotope and Dental Micro-Wear Texture Analysis of Domestic Dogs from the Tennessee River Valley" was recognized as an outstanding presentation based on original research. After completing her Associates degree at Jackson State Community College, Meagan completed her BA in Anthropology at East Tennessee State University (2010) and MA in Anthropology (zooarchaeology specialization) at UTK in 2013. Dennison was the lead author on Linville Cave (40SL24) in Volume 7 of *Tennessee Archaeology* (Volume 7, Issue 1).

Congratulations to all of these award recipients for earning special recognition at the state and national levels. Tennessee archaeology is alive and well!

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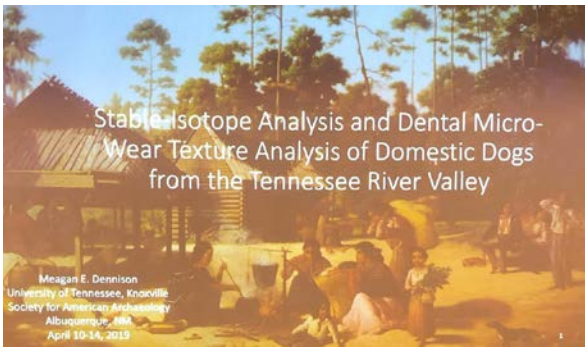


**FIGURE 9. Meagan Dennison and award winning paper (*Courtesy, Department of Anthropology, University of Tennessee, Knoxville*).**

# OUR LADY OF THE CUMBERLAND: STYLES, DISTRIBUTION, AND COMMUNITY

**Robert V. Sharp**

*The female effigy bottles of the Middle Cumberland Region constitute the most important subject in the pottery of the region. The figure referred to as the Woman in the Patterned Shawl or the Middle Cumberland Changing Woman may represent one or more local iconographical manifestations of a supernatural personage more generally perceived to be an Earth Mother deity. As part of an ongoing study of these effigies, this paper presents the most complete assessment to date of their identifiable styles, distribution, and the communities that employed these objects in medicine or other ritual societies prior to their deposition in mortuary contexts.*

Thirty years ago, Vernon J. Knight, Jr. (1986), identified the triad of cult institutions that he believed operated in Mississippian societies and the roles that ritual objects, *sacra*, literally holy things, served in religious events, as opposed to purely secular or political phenomena (Knight 1986). The title of the present study is not intended as a facetious invocation of sacred figures of religious beliefs and ritual practices and the cultural artifacts that may be closely associated with the veneration of such figures, but is instead earnestly chosen to signal that this study deals with holy things whose mortuary context in the graves of children puts them at the very heart of a community's personal experiences and most revered social practices. This is a context that Frederic Ward Putnam, if not perhaps Edwin Curtiss, doubtless recognized in the 1870s when both of these men dug and discovered the graves of children in cemeteries and in house floors across the Middle Cumberland Region (Moore and Smith 2009, 2012; Putnam 1878), and it is one that Kevin E. Smith much more recently described and quantified in his dissertation (Smith 1992). Research over the past decades has confirmed this archaeological finding and added greater numbers to the corpus of identified objects and known examples, documenting that the burials of neonates, infants, and subadults are not only more significantly accompanied by mortuary goods than the graves of adults, but also much more closely identified with the presence of one particular class of *sacra*: the ceramic female effigy bottles and figurines of the Middle Cumberland Region, effigies that are considered to be the most important subject in Middle Cumberland ceramics (Sharp 2007, 2008, 2009, 2011; Sharp et al. 2011; Sharp and Smith 2015; Smith 1992:270–274 and Figure 69; Smith and Sharp 2014).

Much more recently, at the Current Research in Tennessee Archaeology (CRITA) conference in 2009, David H. Dye described the Great Serpent cult that was widespread in the Midsouth between 1250 and 1400, and in looking at the religious practitioners, the cult members, who made these holy things and handled them in ceremonies of veneration directed at deities and spirit beings, Dye spoke about a "conjunction of cults," the way we see sacred objects of various types overlapping in the archaeological record. These scholars have helped bring focus on one part of the complex of what Knight has called "the *iconic family*, the set of *sacra* particularly associated with a corresponding cult institution" (Knight 1986:676).

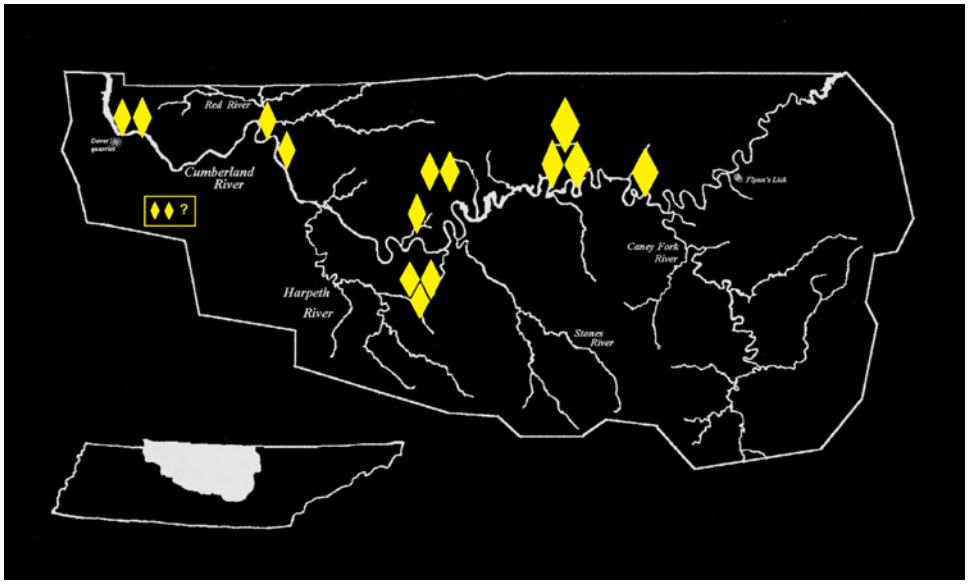


**FIGURE 1. Distribution of Group 7 negative-painted female effigy bottles.**

In addressing the negative-painted female effigy bottles, while recognizing that this technique of ornamenting ceramics is the most sophisticated artistic treatment accorded objects in the Middle Cumberland Region, one must be acutely aware of the danger of pulling them out of the larger context that should also include concurrently an examination of the other extremely well crafted types of negative-painted objects that the Middle Cumberland produced over this period of profound change, all of them no doubt sacred objects: carafe-neck bottles, “dog” bottles, Janus bottles, and owl effigy bottles. These are the categories of negative-painted objects, together with the female effigy bottles and figurines, that constitute the most significant *sacra* of the Middle Cumberland culture, as together they were most likely used by cult practitioners to address the complex of sacred figures and revered “other than human” persons of their cosmology: notably, the Great Serpent, the Hero Twins, and Earth Mother.

This research will address only the most dominant subject in Middle Cumberland ceramics: the female effigy bottles and figurines. The aim is to present five groups of negative-painted figures, one of which is thought to reflect a practice widely shared by women in many dispersed communities, while the others are believed to represent the creations of individual female artists or the product of ceramic workshops that they directed, though their productions as well can be widely distributed. The works these women produced have been found in mound centers and nucleated villages spanning approximately 200 years across the Middle Cumberland Region. Note should be taken that the group numbers assigned to these objects are no more than an artifact of earlier attempts at cataloguing these pieces.[1]

## Earliest Examples: Group 7

Drawing on the archaeological fieldwork that Kevin E. Smith and Emily Beahm undertook at Castalian Springs between 2005 and 2011, it would appear that the female effigy bottles and figurines included in Group 7 (Figure 1) represent

**FIGURE 2. Rear, profile, and front views of female effigy bottle, Smith County, Tennessee (private collection; © *David H. Dye*).**

**FIGURE 3. Rear, profile, and front views of female effigy bottle, Stewart County, Tennessee (private collection; © *David H. Dye*).**

the earliest examples we have — dating to approximately AD 1250-1350 — and that Castalian Springs may well be the source of this style group (Smith and Beahm 2010; Smith et al. 2012). This group encompasses the well-known effigy bottle from Smith County (Figure 2), excavated from a rock shelter overlooking

**FIGURE 4. Fragment of a negative-painted female effigy bottle, Castalian Springs Mounds, Sumner County, Tennessee; excavated June 2011 (*Photograph, Castalian Springs Archaeological Project).***

the Cumberland River in 1967, along with two examples from the Rutherford-Kizer site in Sumner County, two from Stewart County (see Figure 3), and two from Montgomery County. There is also a portion of another piece in the Tennessee State Museum (TSM) —consisting of the head and upper torso—that is assigned to this group from the White's Creek area of Nashville, along with three complete female effigy bottles from the Noel Cemetery that are also in the TSM collection (Sharp 2018). In addition, there are two more complete female effigy bottles that are unprovenienced, though acknowledged to be from the vicinity of greater Nashville.

In addition to a female effigy figurine that was recovered from Castalian Springs and published twice by William E. Myer (1917 and 1928), though it has been unseen since the late 1930s, Smith and Beahm's field school recovered three fragments of negative-painted females in 2008 and 2011, one of which (Figure 4) from the top of Mound 3 was radiocarbon dated to 1275–1319. At present, as these fragments were not recovered from mortuary contexts, these dates constitute the most accurate assessment of any Middle Cumberland female effigy bottle or figurine. Given that it is difficult to judge from small fragments the hand of the artist who may have been responsible for it, no claim is made here that any of the sixteen separate works represented in this early group were made by the same individual. Indeed, there is no certainty that more than one of these sixteen is by the same artist, so in this way this group differs from the others to be presented below. Nonetheless, recognizing that two are unprovenienced, what should be noted is that eleven of the remaining fourteen of these examples fall along the north side of the Cumberland, stretching west to east from Stewart County to Smith County—possibly spreading out from Castalian Springs as the generative center of this cult manifestation—while the three remaining examples, all by different hands as well, come from the well-known burial ground known as the Noel Cemetery. Overall, this substantial group then may have constituted the first wave of attention devoted to a female deity associated with

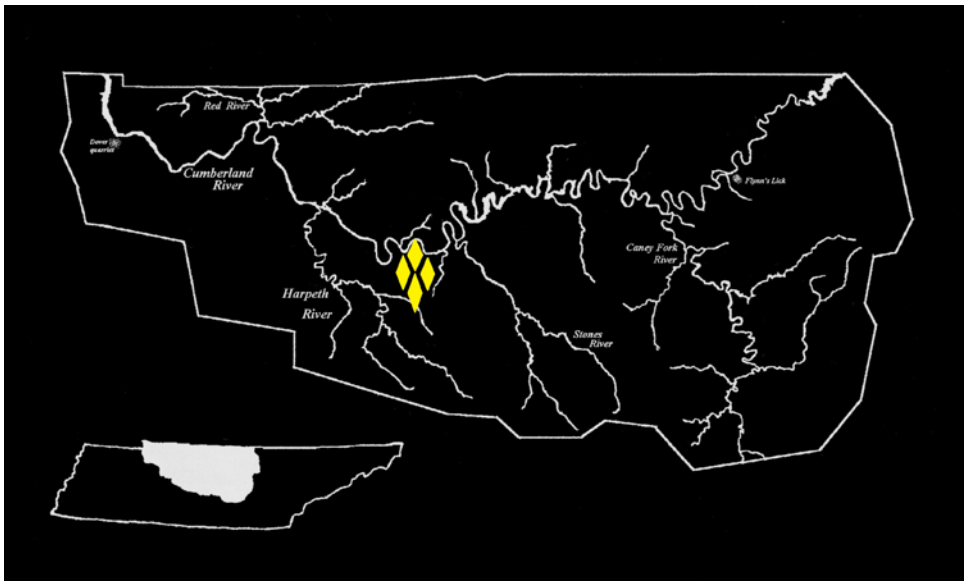


**FIGURE 5. Distribution of Group 1 negative-painted female effigy bottles.**

the burial of children and ignited an increasing interest in the creation and use of these effigy vessels throughout the remainder of the Middle Cumberland Region (Sharp 2018).

Even though these effigies may represent the efforts of many different female artist-makers, the attributes of Group 7 members are extremely consistent: these are slender figures, kneeling upright, straight-backed, and tightly skirted, with a hair-bun at the back of the neck or top of the back that is often perforated. In most cases these females rest their hands against their abdomen, though some rest them on their thighs. Although some of these effigies no longer display much of the negative painting that no doubt once adorned them, others retain enough to demonstrate that the pattern replicated on them, time and again, is the same as that shown on the example with the perhaps the best-preserved negative painting (Figure 2). In profile view, this female exhibits what can confidently be interpreted to be the early stages of pregnancy, kneeling in repose with her hands against a swelling abdomen (Figure 2). So, although the individual handling of the modeling of these figures may illustrate the work of a dozen or more artists, the remarkable similarities shared by their treatment of the negative-painted wraparound shawl, with always slight differences to be acknowledged, capture the depiction of the same fundamental pattern by a group of women scattered across the northern half of the Middle Cumberland Region.

## Groups 1 & 2

In contrast to the distribution of Group 7 members across the northern portion of the Middle Cumberland Region, the next two stylistic sets, Groups 1 and 2, are much more concentrated. Group 1 comprises four works, all excavated from the massive Noel Cemetery site in south-central Nashville, where Gates P. Thruston (1890) reported that he had “opened” 3,000 stone-box graves (Figure 5). The Noel Cemetery was also one of the many sites in the Nashville area where Edwin Curtiss and George Woods excavated on behalf of Frederic Ward

**FIGURE 6. Group 1 female effigy bottles, Noel Cemetery, Davidson County, Tennessee [a) © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 78-6-10/14218; b) © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 84-63-10/34286; c) Tennessee State Museum 82.100.5; © David H. Dye; d) University of Pennsylvania Museum of Archaeology and Anthropology 97-86-135; © David H. Dye].**

Putnam of the Peabody Museum at Harvard University (Moore and Smith 2009, 2012).

The initial identification of two of these figures from the Peabody as works by the same artist was made by Ian W. Brown when he catalogued that collection (2002, 2006). The first of these was discovered by Edwin Curtiss in 1878 (Figure 6a), while the second one (Figure 6b) was found in the grave of a child in 1884 by George Woods, excavating at Cain's

**a** **b** **c**

**FIGURE 7. Group 1 female effigy bottles, Noel Cemetery, Davidson County, Tennessee [a) © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 78-6-10/14218; b) Tennessee State Museum 82.100.5; © David H. Dye; c) University of Pennsylvania Museum of Archaeology and Anthropology 97-86-135; © David H. Dye].**

Chapel (part of the overall Noel Cemetery grounds) on behalf of Frederic Ward Putnam. To them I have added a third piece in the Tennessee State Museum (Figure 6c; Sharp 2011), and a fourth newly discovered in the University of Pennsylvania Museum of Archaeology and Anthropology (Figure 6d) that I am convinced were made by the same woman -- even though the latter two were not coated with a white slip prior to negative painting. Notable here on three of these kneeling figures, in the depiction of the wrap-around shawl above their dark-stained skirts, are the hands that emerge from that shawl and rest on the abdomen, hands that have not been modeled or incised but only rendered through negative painting.

In addition, two of the four works are identical in height, the second being only 2 cm smaller and the fourth 2 cm larger. All exhibit the same four-node hairstyle and slightly upturned angle of the head. Profile views (Figure 7) reveal that the female figure represented by these effigy bottles may be either straight-backed or humpbacked (Sharp et al. 2011). This aspect is what led Smith and Sharp (2014) to refer to this anthropomorphic female as “Middle Cumberland Changing Woman,” a notion borrowed from the Navajo of the American Southwest, where Changing Woman is one of their principal figures. The idea aimed at by this usage is that this female supernatural figure herself reflects the changes over time that can occur in a woman’s body, from an upright youthful figure to a more rotund physique to finally a female deity who shows her extraordinary longevity by displaying unavoidable signs of curvature of the spine: a sign of advanced age, not disease.

Group 2 is strongly centered at the Gray Farm on the Harpeth River in

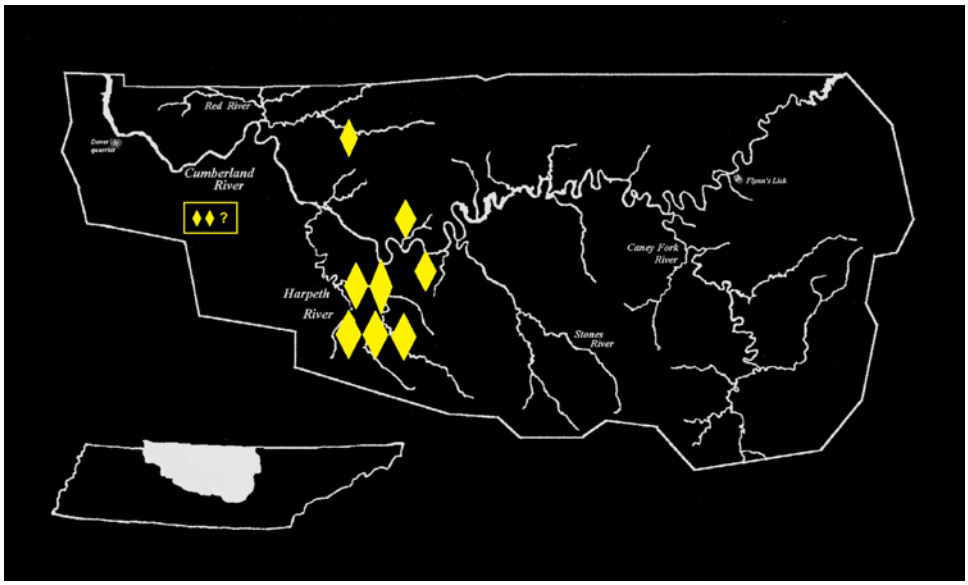


**FIGURE 8. Distribution of Group 2 negative-painted female effigy bottles.**

Williamson County (40WM11) with five examples, along with one head found at the Noel Cemetery in Davidson County; one splendid piece from the Averbuch site (40DV60), northwest of downtown Nashville; one example from Robertson County to the north, possibly from the Wessyngton Plantation (see Hathcock 1988:103, no. 252); and two other unprovenienced pieces (one in the Tennessee State Museum [see Cox 1985:no. 12] and one in the Gilcrease Museum in Tulsa, Oklahoma [5425.1514]) (Figure 8). Once again, the particular set of four effigy bottles from the Gray Farm site (Figure 9) was first proposed as the work of the same artist-potter by Brown (1990, 2002, 2006). Three of the four were buried in the graves of children, while the context of the fourth is uncertain.

Based on seriation of cemetery gravelots, Group 2, like Group 1, can be placed at approximately 1300 to 1400. Like Group 1, these examples have the four-part hairstyle, the same upturned heads, and a small node at the back of the neck representing a hair-bun. Also like Group 1, these four from the Gray Farm are both straight-backed and humpbacked (Figure 10), as are other examples in Group 2: the unprovenienced examples from the Tennessee State Museum and the Gilcrease Museum are both straight-backed, while the female effigy bottle from the Averbuch site in Davidson County is, by contrast, dramatically humpbacked (Figure 11), extremely close to the large humpbacked example from the Gray Farm (Figure 10, right). The single artist-potter responsible for these works applied a heavy white slip to many of them prior to the negative painting, but, as earlier examples have shown, the sadly perishable nature of the negative painting, especially under mortuary conditions, has meant the loss of most of the patterned shawl on these female effigy bottles, if not also the loss of the white slip itself.

Having long accepted Brown's characterization of the Peabody Museum examples, I have found that the more pieces I discover that appear to belong to Group 2, the more I want to acknowledge the remarkable similarities of the physical

**FIGURE 9. Group 2 female effigy bottles, Gray Farm, Williamson County, Tennessee [a) © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 78-6-10/15853; b) PM# 78-6-10/15870; c) PM# 78-6-10/15898; d) PM# 78-6-10/15983].**

features and overall modeling of Groups 1 and 2 in their entirety. While the possibility exists that these might be examples of the production of two workshops familiar with each other's creations (Smith and Sharp 2014), I find myself increasingly believing that they may well be all by the same female artist-potter, or made under her supervision, perhaps at two different periods of time. If that is the case, it would mean the remarkable production of perhaps fourteen or more effigy bottles, inviting us to ask what social mechanism governed their distribution and use.

**FIGURE 10. Group 2 female effigy bottles, Gray Farm, Williamson County, Tennessee [a) © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 78-6-10/15853; b) PM# 78-6-10/15870; c) PM# 78-6-10/15898; d) PM# 78-6-10/15983].**

Certainly, the concentration of pieces from Groups 1 and 2 at the Noel Cemetery and the Gray Farm would suggest that this individual had important connections with both of these major sites. The Gray Farm site, as we shall see further, was a generative center for other artifacts as well, while the Noel Cemetery may have simply retained its role as a necropolis throughout a longer period of time than the appearance of objects there from the earlier Group 7 may have led one to expect.

**FIGURE 11. Front and profile illustrations of female effigy bottle 362, Averbuch, Davidson County, Tennessee; © 2019, Patricia J. Wynne.**

**FIGURE 12. Comparison of two female effigy bottles (362 and 237) from Averbuch, Davidson County, Tennessee, representing Groups 2 and 3; © 2019, Patricia J. Wynne.**

## Group 3

The transition between Groups 1 and 2 and Group 3 is, stylistically, just as dramatic as that between the trim, upright, straight-backed examples of the early Group 7 effigies and the members of the somewhat later Groups 1 and 2. A secure sense of this can be gained by a direct comparison of two works, both from the Averbuch site, a late-14th- to mid-15th-century nucleated village (Figure 12), though it should be stated clearly that while these two examples used for comparison were excavated at Averbuch, both were almost certainly made at the

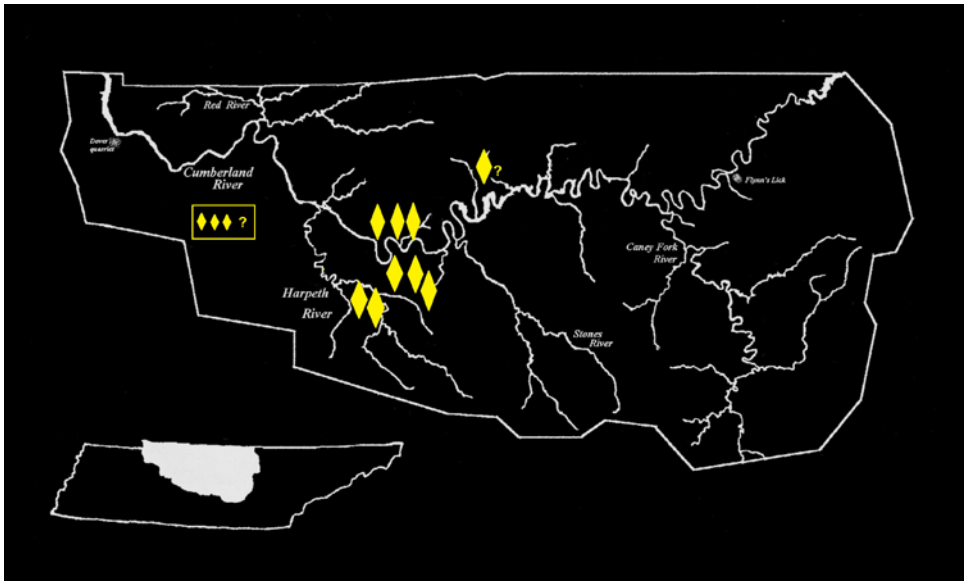


**FIGURE 13. Distribution of Group 3 negative-painted female effigy bottles.**

Gray Farm site in Williamson County. Although both of these effigies display the same type of ceramic paste, their modeling of ears, hairstyles, facial structure, shoulders, and the overall girth of their physique really divide them stylistically. The shoulders of Groups 1 and 2, for example, are rounded and even drooping, while those of Group 3 are raised and thus more pronounced. The arms of the Group 2 example are broad and settle into a waist that swells, while the much thinner arms of the Group 3 effigy wrap down and around the tighter waist of its hourglass figure. While the hair on the Group 2 example exhibits the four-node style, that of the Group 3 specimen is concentrated on top as a small, single roach. Finally, the ears of the Groups 1 and 2 figures are largely shapeless, often uneven, and unpierced, while those of the Group 3 example are large, well-formed, and often pierced.

Group 3 has twelve or more members, with two at the Averbuch site; two at the Gray Farm; one from what Edwin Curtiss in May 1879 called “Mr. Gower’s Place” on the western edge of Davidson County; one adjacent to the Noel Cemetery at the nearby McNairy Mound site on Granny White Pike; one at Travellers Rest (40DV11); one at the Logan site in Belle Meade (40DV8); and possibly one from the Rutherford-Kizer site in Sumner County that belongs here (Figure 13). There are also three unprovenienced female effigy bottles that should definitely be included in Group 3: one in the Otto Giers collection at the National Museum of the American Indian (048317.000); one in the University of Arkansas Museum collection (47-6-184); and one from Davidson County in the Brooklyn Museum (60.53.3). Thus far, every member of Group 3 is humpbacked. Drawn from various sites in Davidson and Williamson counties, all display the full wrap-around negative-painted pattern and appear to date latest, between 1350 and 1450. Figure 14 shows prime examples of Group 3: all three display much more of an hourglass figure than anything we have seen prior, with broad shoulders above the tightly skirted lower body. All three have distinctive rope-like arms that wrap down under the chest and meet

**FIGURE 14. Group 3 female effigy bottles [a and d) Gray Farm, Williamson County; © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 78-6-10/15980; b and e) Gower place, Davidson County; © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 79-4-10/18618; c and f) Davidson County, Brooklyn Museum 60.53.3; © David H. Dye].**

against the abdomen. All three show the remaining evidence of the same negative-painted pattern, and we know that two of the examples were buried in the graves of children; the context of the third is uncertain. As their profiles reveal (Figure 14d,e,f), in addition to their hair roaches and immense ears, there is a characteristic way that the hair-buns are tucked under the vessel's aperture, and frequently perforated.

Another example from the Gray Farm

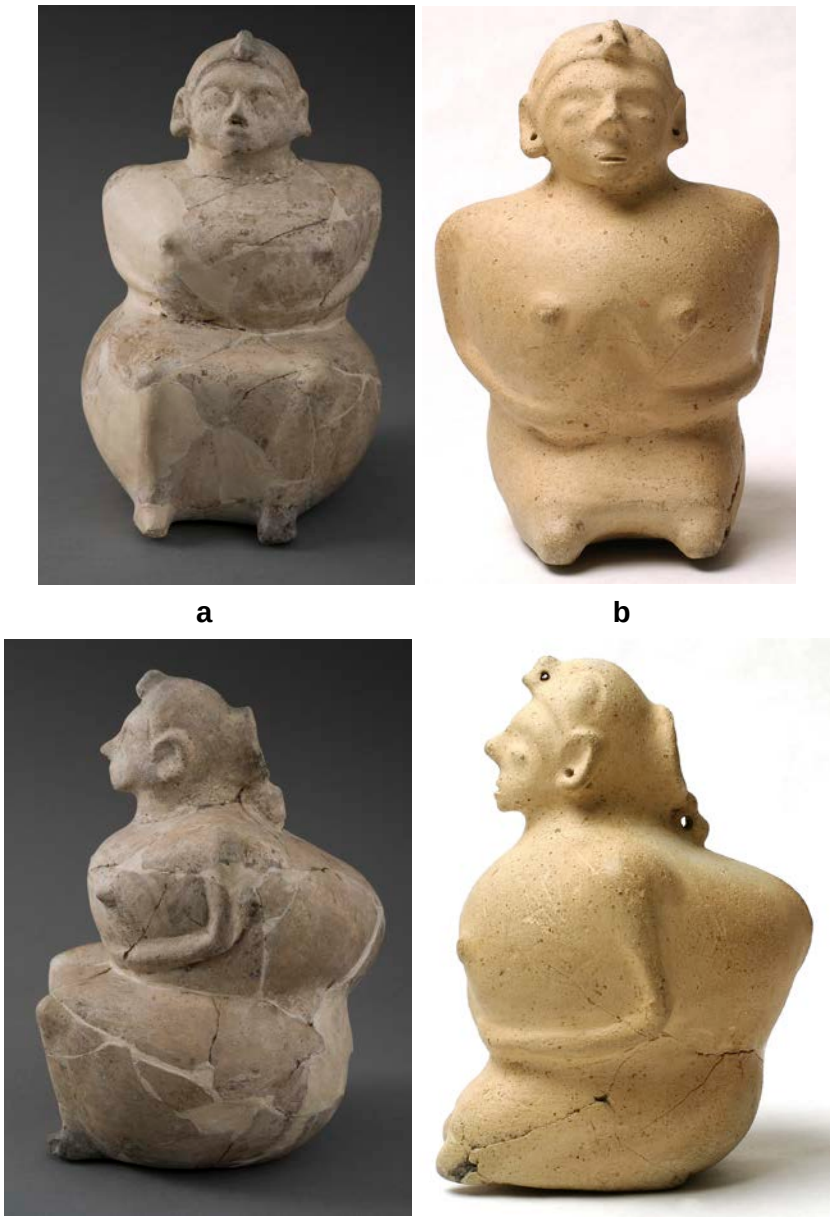


**FIGURE 15. Group 3 female effigy bottles [a and c) Gray Farm, Williamson County, Tennessee; © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 78-6-10/15999; b and d) Logan site, Davidson County, Tennessee, private collection; © Joseph Mohan].**

site introduces an important new posture that has not been addressed: Figure 15a shows a very large, negative-painted female effigy bottle (height 26.2 cm) with classic features of the Group 3 stylistic set, but unlike the kneeling females shown throughout this article, this example is seated, with the knees of both legs up in front of her. This female has the requisite features: large ears; a single prominent roach of hair; sharply defined, even elevated shoulders; rope-like arms—all consistent with other members of this group, such as a very similar figure from

**FIGURE 16. Front and profile views, female effigy bottle, Rutherford-Kizer site, Sumner County, Tennessee; © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 79-4-10/17269.**

the Logan site (40DV8) on the southwest side of Nashville (Figure 15b). Their profiles show slight differences in the treatment of their hair-buns, but both have the same expanded or pushed-out chest with small breasts that is characteristic of Group 3, and both display pronounced humps (Figure 15c,d). There is no question that the seated figure belongs to this group, and as her form is quite likely a birthing posture, this work introduces an important thematic concern that is consistent with our focus on the role of these effigies in the mortuary treatment of infants and children. The seated form is a familiar one in the Middle Cumberland Region, though not among the negative-painted corpus; other examples are known from Williamson County: one is in the Smithsonian's National Museum of Natural History (A317472), while another was found during the salvage archaeology project at the Brentwood Library site (40WM210; Moore 2005:158–160, Figures 80–81). The latter, it should be noted, was recovered from the stone-box grave of a child.

Stated above is that all Group 3 members are humpbacked, but recently I have been wondering whether a compound effigy bottle from the Rutherford-Kizer site belongs in this group (Figure 16). Also from the Peabody Museum (79-4-10/17269), it was recovered in December 1878 by Edwin Curtiss. The vessel is clearly negative-painted, most of which is visible on the lower back and sides of the figure. If this is indeed a member of Group 3, it will be the first that is straight-backed, as its profile shows. I've not had the privilege of examining this piece in person, but it

appears to have the same large ears and single roach on top that other members of Group 3 display. I should also note that the female here is clearly in a more advanced stage of her pregnancy, a fact that will connect her thematically with the larger concerns of this study. To my knowledge, this particular compound form is singular in the Middle Cumberland Region, but other examples are known in the Central Mississippi Valley from both Mississippi County and New Madrid County, Missouri (see National Museum of Natural History, A224328, and the Gilcrease Museum, 5425.1322, respectively).[2] It might well be considered as an import (Brown 1990) but for all of its other stylistic connections with the members of Group 3 and, most especially, its negative painting.

## The Middle Cumberland Female Effigies and the Braden Style

As I first noted at the Southeastern Archaeological Conference in 2007, the pattern we have seen repeated over and over again by the female artist-potters whose work is represented in Groups 1, 2, 3, and 7—the negative-painted replication of a negative-painted hand-twined wraparound shawl—also appeared on plate 2 in Phillips and Brown's 1978 compendium of engraved shell cups from Spiro (Figure 17). The design on the female effigy bottles and figurines—a large, broad barred-oval—was first delineated by Philip Phillips in his 1939 dissertation at Harvard University (Sharp et al. 2011:181–183, Figures 8.4 and 8.5), though I have found no evidence that Phillips ever made the connection with the design on the shell cup from Spiro. The design on this shell cup is one of the early Braden-style images in the corpus of engraved shells, a body of work that

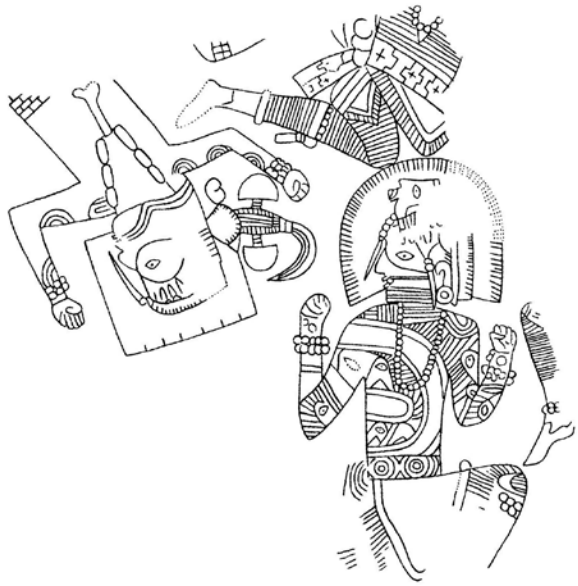

**FIGURE 17. Braden-style engraved shell cup from the Great Mortuary in the Craig Mound at Spiro, Le Flore County, Oklahoma, showing a dancing figure with a ceremonial headdress and a painted or tattooed wrap-around pattern across his chest and right arm (Reprinted by permission from Philip Phillips and James A. Brown, *Pre-Columbian Shell Engravings from the Craig Mound at Spiro*, Part 1. Peabody Museum of Archaeology and Ethnology, Harvard University (Cambridge, MA, 1978), line drawing of plate 2).**

Brown (2004, 2007, 2011) has argued originated at Cahokia. Clearly the connection with this shell cup is only one of several pieces of evidence that the Middle Cumberland Region received the introduction of people and their ideas from Cahokia during the early Moorehead phase and that their impact was well established by the end of the 13th century (Sharp et al. 2010, 2019).

Certainly, the nearly complete figure in Plate 2 sporting the pattern worn across the Middle Cumberland is an important subject, as indicated by his panoply of regalia, including, most notably, the

**FIGURE 18. Rear, profile, and front views of effigy bottle displaying male genitalia and female breasts, Noel Cemetery, Davidson County, Tennessee (private collection; © David H. Dye).**

agnathous head in his headdress. That element alone signals that he is involved in what Brown and Dye (2007:279) have called "an allegory that is invoked about the cosmological mainspring of human regeneration." Emblazoned with the barred-oval motif writ large across his painted or tattooed body, this dancing figure thus celebrates his role in the cosmic narrative that recalls feats of taking life when necessary in order to restore life and continuance to one's own family, kin, or community. The regeneration of the slain father is but part of the cycle; new life must also be borne by women so that through their labors diminished communities can be renewed and their numbers replenished.

That the barred-oval pattern also appears on a small stone figurine of a seated male from the Castalian Springs site makes the locus of both this exchange of media and the transference of symbol from male to female seem almost incontestably Middle Cumberland, if not actually something to be attributed to Castalian Springs itself (Sharp 2008; Sharp et al. 2010, 2019). But in the transference of this iconographic motif from male to female and from marine shell to stone to ceramic—replicated dozens of times thereafter—there is another object to be considered, which, if it does not provide a direct link in the chain, at least confirms that the female makers of these effigies were conscious of the symbolic import of their work: For among the numerous figures that have been found in the massive burial ground of the Noel Cemetery is a ceramic effigy bottle, displaying our complete pattern, with demonstrable evidence of the mixture of male *and* female primary and secondary sexual characteristics: i.e., male genitalia and female breasts (Figure 18). In addition to reminding us that these effigy bottles and figurines are depicting supernatural figures or deities or "other-than-human persons," not mere mortal humans, this effigy bottle should certainly confirm that the women who made these works understood that the narrative that brought forth the significance of wearing the negative-painted barred-oval pattern

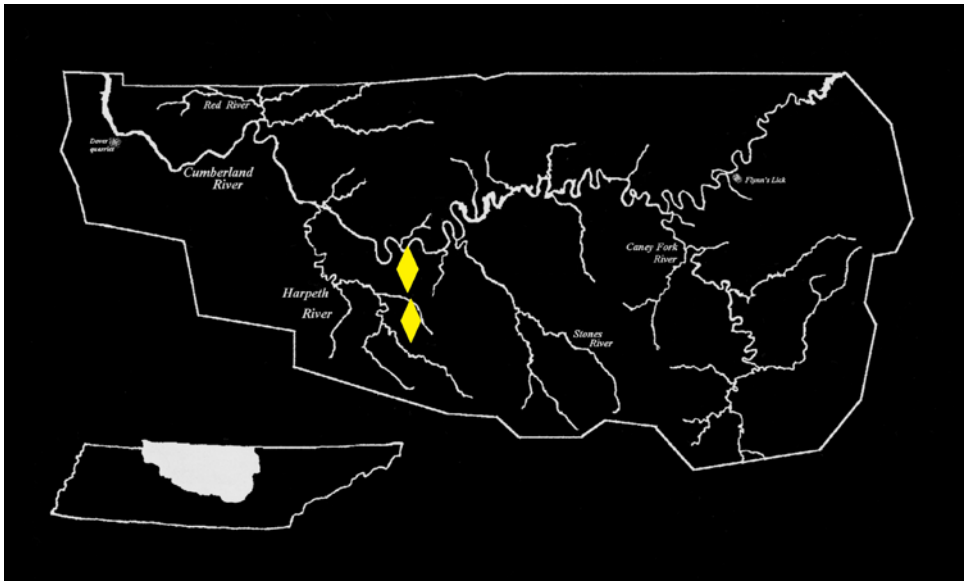


**FIGURE 19. Distribution of Group 4 negative-painted female effigy figurines.**

also fundamentally required the engendering of new life to recover the lost souls of their beloved infants and children.

## Group 4

A final, but important, new piece of evidence for the connection between the Middle Cumberland Region and the Classic Braden–style body of iconography is offered by Group 4, which has only two examples, but its own story to tell (Figure 19). One of the examples (Figure 20a,c) was found in 1879 by Edwin Curtiss at the Emily Hayes Farm, a palisaded mound center now identified as the Arnold site (40WM5), established in the mid-12th century. This site lies in northernmost Williamson County, perhaps a mile from Brentwood, above the north bank of the Little Harpeth River (Ferguson 1972; Moore and Smith 2009). The other example (Figure 20b,d) was found approximately six miles north in 1932 in south Nashville near Sugartree Creek—on the property of Bruce P. Shepherd on Abbott Martin Road (40DV694; Cox 1985:122)—on what was prehistorically a small village cemetery site.

These figures introduce several notable points to this overall discussion. First, the modeling of both of these figurines—and they are ceramic figurines, not bottles—is so similar that they are convincingly the work of the same artist: both display young women, trim and kneeling in a very upright posture, straight-backed, with very thin arms, hands resting against their thighs. Overall, the figurines vary in height by less than two cm, the taller one from the Arnold site being 22.2 cm. The legs of both figurines are modeled underneath, feet turned inward. Both women wear the same type of cap, from which a strand of hair emerges from the top. That strand is then braided or gathered and joins hair emerging from underneath the cap in a small bun that terminates at the middle of the back. Both women wear short skirts that end just above the knees, with very clearly defined waistbands visible at front and back. While both figurines display pierced earlobes, both are also drilled through in the area of their arm pits; this latter aspect could have enabled them to

**FIGURE 20. Group 4 female effigy figurines [a and c) Emily Hayes farm/Arnold site, Williamson County, Tennessee; © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 79-4-10/18301; b and d) Bruce P. Shepherd estate, Davidson County, Tennessee, Tennessee Historical Society Collection, Tennessee State Museum 82.100.1092; © David H. Dye].**

be tied to a support for display, or may have served for the attachment of a garment, or indeed some other use. Finally, each of these female figures is depicted holding what appears to be a bead in her mouth, though the significance of this element and any relevant prehistoric Native American narrative that might explain it remain uncertain at this time.[3]

While these two figurines may bring with them still unresolved aspects, they connect in fundamental ways with the objects discussed thus far, principally as

they represent negative-painted shell-tempered effigies of anthropomorphic females, and as both were found in the graves of children—just as with virtually every one of our female effigy bottles where context is known. It is certainly possible that this figure may be a distinct character, different from the supernatural personage or deity I have called Our Lady of the Cumberland in the title of this article or referred to as the Middle Cumberland Changing Woman described earlier in this work (Smith and Sharp 2014). But it is also possible that these two examples of a stylistically different anthropomorphic figurine reference a narrative now lost to us, and thus present us with only a different iconographical manifestation of the same Earth Mother figure. While the example from the Emily Hayes Farm/Arnold site, now in the Peabody Museum collection, has only some very slight evidence of negative painting, the figurine from the Shepherd estate in Nashville, now in the Tennessee State Museum, has retained much more of its original design, though only recently have the negative-painted elements that it bears upon it been identified and understood. Although the overall pattern is a different one, its concerns are consistent with and securely aligned to the iconography of the much larger sample of negative-painted female effigy bottles discussed above, as I will try to show.

A reexamination of the Tennessee State Museum figurine in 2014—by this author in concert with Kevin E. Smith of Middle Tennessee State University—focused on the character of negative painting on the figure's chest, her left arm, and her back, and took note as well of the remains of some red pigment (Sharp and Smith 2015). Once again, as the diagonal hatched design on the left side of her torso carries across her left arm, this figure is, like the Middle Cumberland female effigy bottles already described, presumed to be wearing a wraparound garment. What had never been identified, however, is the presence of ogee motifs with barred-oval centers visible on the figurine's chest and back. Perhaps the most complete and recognizable ogee is at the upper part of her torso behind her left arm. The discovery of this pattern is critical to a proper understanding of the role of these ceramic figures, because it confirms that, once again, women artists in various communities in the Nashville

**FIGURE 21. Braden-style engraved shell cup from the Great Mortuary in the Craig Mound at Spiro, Le Flore County, Oklahoma, showing a kilted dancing figure with a ceremonial headdress of bilobed arrows, holding a bird-wing fan, wearing a feathered cape, and painted or tattooed with an overall pattern of ogees (Reprinted by permission from Philip Phillips and James A. Brown, *Pre-Columbian Shell Engravings from the Craig Mound at Spiro, Oklahoma* Part 1. Peabody Museum of Archaeology and Ethnology, Harvard University, (Cambridge, MA, 1978), line drawing of plate 19).**

**FIGURE 22. Eastern copperhead, © John White – Virginia Herpetological Society.**

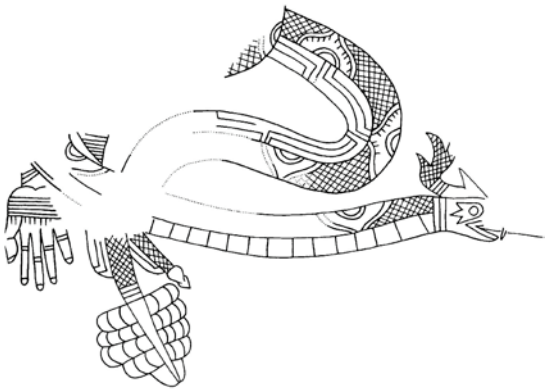

**FIGURE 23. Engraved shell cup from the Great Mortuary in the Craig Mound at Spiro, Le Flore County, Oklahoma, showing intertwined snakes with a dorsal pattern of ogees (Reprinted by permission from Philip Phillips and James A. Brown, *Pre-Columbian Shell Engravings from the Craig Mound at Spiro*, Part 1. Peabody Museum of Archaeology and Ethnology, Harvard University (Cambridge, MA, 1978), line drawing of plate 76).**

basin were using textiles to establish identity, and essentially to communicate the importance of this female character. Like the makers of the ceramic effigy bottles, the woman artist responsible for this pair of works is also using negative-painted ceramics to exemplify the social practice of wearing negative-painted twined textiles that here registers symbolically the larger role of a deity who is being beseeched in the mortuary rites attending the interment of children.

## The Iconographical Nexus: Female Effigies, Triskele Gorgets, Braden-style Cups, and the Burials of Children

The depiction of the female effigy figurine from the Shepherd estate with an overall pattern of ogees has its own connection to Classic Braden–style imagery. The shell cup that it is engaging with is Plate 19 in the catalogue of engraved shell cups from Spiro (Figure 21), on which a kilted dancing figure—with an elaborate bilobed-arrow headdress, a bird-wing fan, and a feathered cape—displays his own allover pattern of ogees on the visible portions of his arm and upper body. What is most important to communicate here is that the ogee is an independent motif that signals a portal, expressing the passage between realms, the movement between This World and the Beneath World or between This World and the Above World (Reilly 2004:130;

**FIGURE 24. Scalloped triskele gorget from the burial of two children (Grave 16), Gray Farm, Williamson County, Tennessee; © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology, PM# 78-6-10/15835.**

Sharp 2007, 2008, 2016a; Sharp and Smith 2015; Smith and Sharp 2014). Rooted in its primary role as a serpent marker, abstracted from the natural patterning of the most widespread venomous snake in the Southeast, the copperhead (Figure 22; Sharp 2007, 2008, 2016a; Scarry and Sharp 2010; Sharp et al. 2010, 2019), the ogee motif in the Mississippian era becomes increasingly generalized as a stand-alone iconographical element, reproduced on stone, copper, ceramic, and wood, as well as shell. It appears on several other engraved shell cups from Spiro as a recognizable motif (Phillips and Brown 1978:153-154, plates 16, 58, 62, 86, and 101), though its appearance on one particular cup as the dorsal pattern on possibly as many as three snakes makes its association with the copperhead and snake markings in general most secure (Figure 23; Phillips and Brown 1978: Plate 76). Those associations contribute to the gradual emergence of the ogee motif as a Beneath World symbol of literal return, seasonally as snakes are known to do, and more conceptually, as a symbol of rebirth, of passage between realms, of transcendence, and even of reincarnation. The dancing figure on the Braden-style shell cup 19 from Spiro may indeed be celebrating the triumph of life over death, especially given that, though possibly originally carved at Cahokia, in the end it was included in one of the extraordinary burials in the Great Mortuary, Burial 62, a complex and richly furnished deposition of human remains and a remarkable variety and abundance of precious funerary goods (Brown 1996, volume 2:700–701). And that is precisely the context that is being referenced in the burials of children and subadults that these effigy bottles and effigy figurines are being employed in.

I also believe that the backdrop for his triumphal dance references another Middle Cumberland icon, the ophidian band of a triskele gorget, one of the artifact classes most closely identified with the greater Nashville area, whose production, no great surprise, seems to issue from the same group of generative sites, such as the Gray Farm, that authored the female effigy bottles (Figure 24). The regally attired figure might almost be imagined to be emerging from the very heart of a triskele. At least five and possibly more Nashville-style triskele gorgets were found in the graves of an adult female and children at the Gray Farm: Burials 6 (female), 24, 26, 94, and 117. Edwin Curtiss's records of his excavations on behalf of Frederic Ward Putnam are not always the clearest account of where he dug and what he found, but they are sufficient to establish a notable association between these objects and those whose welfare may be

in the hands of the Earth Mother, who could thereby be being petitioned for intervention or guidance of the soul of a deceased child. In the case of Burial 24 at the Gray Farm, that of a child, an unfinished triskele gorget was placed together with one of the Group 3 female effigy bottles (Figure 14).

Burial 16 in the mound at Gray Farm, which held the remains of two children, also contained a remarkable set of mortuary goods: two negative-painted carafe-neck bottles (Peabody Museum 78-6-10/15831 and 15832)—one for each child presumably; a duck-head adorno or rim-rider bowl, which held two shell spoons (Peabody Museum 78-6-10/15833 and 15834); some 70 shell beads; and a splendid Nashville-style triskele gorget (Figure 24). Perhaps the use of a pair of negative-painted bottles fulfilled some role that the women who prepared these graves required in the absence of a female figure. The effigy bottles of course only appear in very small numbers relative to the total number of burials, but if the negative-painted vessels participate in the same "iconic family" of *sacra* as the effigies, then some logic of substitution may well be operative here.

In addition to the burials just described from the Gray Farm, if we step outside the negative-painted female effigy category, there are a number of other examples drawn from the substantial corpus of female effigies by women artists other than those I have already described that continue the association between triskele gorgets, female effigy bottles, and the graves of children. Grave 42 on the Jarman Farm in Williamson County, for example, which was excavated by Putnam in 1882, yielded a humpbacked female effigy bottle together with a Nashville-style triskele gorget (Peabody Museum 82-35-10/27392 and 27401, respectively). When this site was later the location of a major salvage operation during the construction of the Brentwood Library (Moore 2005), Burial 45, that of an infant, was found to contain a humpbacked female effigy bottle. During Curtiss's excavations at the Gower Place in May 1879, from which he recovered one of the Group 3 female effigy bottles from the burial of a child (Grave 27), he also found a triskele gorget in Grave 4, in which, evidence suggests, lay the remains of three children. Although these examples are by no means complete—as by my count roughly half the negative-painted female effigy bottles and figurines have documented context and all of those are with the graves of children, and roughly half the undecorated female effigy bottles and figurines have documented context and all of those are with the graves of children—the unprofessional nature of Curtiss's excavations and record-keeping have denied us proper contextual information on countless burials he is responsible for, just as is the case with the burials "opened" by Thruston and others.

Where the context is secure, the evidence for this complex of associations continues to mount: salvage excavations at the Gordontown site in Davidson County in 1985–86 uncovered among all the stone-box burials the grave of one young child, Burial 45, that contained two female effigy bottles—one straight-backed, white-slipped female with her hand on her swelling abdomen; the other a somewhat shorter humpbacked example posed similarly (Moore and Breitburg 1998). Analysis of the excavations undertaken in 1998 at the Kelley's Battery site in Nashville's Bell's Bend area of the Cumberland—a 14th-century nucleated village—reported the discovery of two Nashville-style triskele

gorgets, one in the burial of a young child and a 10-year-old, the other in the burial of a young child with a newborn, Burials 81 and 112, respectively (Jones 2017).

The overall study of these elements has been given renewed focus in the explication of just such points of intersection between the burials of infants and children and the placement of female effigy bottles and figurines in their graves; between the burials of infants and children and the placement of triskele gorgets and other *sacra* in their graves; and between the marking of the female effigy bottles and figurines with ogees and barred-ovals and the use of those iconographic motifs to represent portals to other realms (Sharp 2007, 2008, 2009, 2016a, 2016b; Sharp and Smith 2015; Smith and Sharp 2014). Knowing that George Lankford (2007) had reviewed the evidence that the well-known asterism the Pleiades was considered a portal to the sky world by the Ojibwa, and that numerous other tribes had various versions of narratives associating the Pleiades with groups of children, often hungry or dancing, who eventually rise into the sky to become the stars of this asterism, Kevin E. Smith (2016, 2018) has recently postulated that the ophidian band of the Nashville scalloped triskele gorgets is more than likely a representation of the Pleiades. Even in the face of the enormous cultural loss that has denied us any legends or myths about the Pleiades by Muskhogean speakers of the Southeast (Lankford 2007:172), but holding fast to everything else we do know about the patterns of cultic practices in the Middle Cumberland Region, Smith's theory is extremely compelling. And it would certainly address my long-standing belief that the dancing figure of Plate 19 from Spiro may be passing into or emerging from a portal depicted as a triskele gorget. To accept this would be to tie even tighter the knot between Middle Cumberland iconography and the engraved shell cups of the Braden-style corpus.

Clearly, the direct association between the triskele gorgets and the burials of females or juveniles is long established. Madeline Kneberg in her 1959 study, summing up the evidence of burials at Hiwassee Island and the Hixon, Dallas, and Fains Island sites, came to this conclusion about the scalloped triskele gorgets (Kneberg 1959:15):

> *Whatever actual symbolism this design may have had for people of the Dallas culture has been lost, but it may be significant that it is never associated with male burials. Of the examples in the University of Tennessee collections, eight were with young or mature female burials and the others with infants. From this it might be deduced that the design motif was a female symbol.*

Recently, Tamira Brennan Christensen (2010) reviewed the context of the burial of a fragmented ceramic effigy bottle depicting a nursing female with a child across her lap and knees. This figure—kneeling, upright, and negative painted—was excavated from the floor of a house by Duncan Wilkie at the Hunze-Evans/South Cape site in Cape Girardeau County, Missouri, in the late 1970s. Wilkie, according to Brennan Christensen, concluded that House 1, from which this female effigy bottle was recovered and in the floor of which five infants were buried, was "a women's structure, perhaps associated with childbirth and fertility" (Brennan Christensen 2010:14). Also with these burials was a local form of a triskele shell gorget. Wilkie himself was highly interested in Kneberg's "female symbol,"

and he sought to refine an understanding of both Kneberg's data and the role of the triskeles, noting (1983) that "Adult females buried with scalloped triskele were youthful and in childbearing years of their life at the time of death," and that "at the Hiwassee site young females just reaching maturity were likely to receive a scalloped triskele gorget at their village-side grave." Wilkie also took note of which infant burials received triskele gorgets and put his finger on precisely the time period of a number of our Middle Cumberland burials: "The span of time between 1350 and 1500 A.D., which is Kneberg's placement of the scalloped triskele and coeval designs, appears to have been a critical threshold in the association of infants (i.e., female activity) to gorgets." Scanning further out from the Hunze-Evans gorget house with its five infant burials to take in Lilbourn and its thirteen infant burials in a house floor, as well as other examples in southeast Missouri (e.g., Powers Fort, Turner, and Snodgrass), Wilkie concluded, "The presence of many infants in a large house may be the burial grounds for a female social unit as signified by the scalloped triskele gorget or some comparable symbol."

This is a point at which several scholars have provided clues that can help us understand the social mechanism by which this happened, most notably two essays that bookend this presentation. First, on the role of historic-period Native American women's sodalities in the execution of symbolic and ritual fertility ceremonies, Ann Thrift Nelson (1976) has proposed that Native Americans such as the Mandan and Iroquois, both of whom were sedentary, agricultural groups, had female sodalities that "not only emphasized female fertility, but were also led by women and were characterized by women's impersonation of female spirits" (Nelson 1976:32). "Mandan women's ritual power . . . was considerable. All of the older women in this society shared such power, and female officers even more so, since they had use rights of major tribal bundles" (Nelson 1976:51). Among the Iroquois, "The women's sodalities were concerned with fertility and curing, and the most important one was the "Sisters of the Three Life-Sustainers," or Towii'sas, which performed important public fertility rites to promote the growth of the crops and propitiate the spirits of corn, beans, and squash" (Nelson 1976:54). Finally, Nelson has noted that the autonomous sodalities among the Iroquois "emphasized, both symbolically and ritually, the complex of associations between women and agriculture, women and fertility, women and birth and growth" (Nelson 1976:56–57). If as Wilkie has described, the gorget house held, in addition to the burial of five infants, a "large cache of uncut mica" as well as caches of pottery, both collapsed vessels and large storage vessels, then this could have been, as Brennan Christensen has argued, a place where women were engaged not only in the care of their children and the fashioning of crafted goods, but also in other "intense female activity" (Wilkie 1983:42). And the most convincing evidence for this, besides some isolated, small negative-painted sherds, is the broken, but fully figured, negative-painted kneeling and skirted female effigy bottle of the nursing mother and child.

At the other end of the historical spectrum, writing about the function of women's places of retreat (such as the Terminal Archaic to Early Woodland–period Newt Kash shelter on the Cumberland Plateau in Kentucky), Cheryl Claassen (2011) has argued that women

engaged with each other during regular and significant periods of time for activities associated with menstruation, pregnancy, childbirth, and healing. In addition to their use as shelters during periods of seclusion, such places as Newt Kash seem also to have been used "for group ritual activities" and that "a medicine society or other sodality may have utilized this space" (Claassen 2011:633, 635). The work of producing nut oils, cordage, fabrics, and more was undertaken in a shelter that was also "a staging place for rites important to a medicine society and that that society/sodality oversaw the retreating and birthing uses of the shelter" (Claassen 2011:635). Given the evidence that at least one female effigy bottle of the Middle Cumberland Region was discovered in a sheltered bluff on the Cumberland River in Smith County (Figure 2), I would argue that the development of artistic skills such as the crafting of both utilitarian ceramic vessels and highly ritualized effigy bottles—not only the female figures but the other forms of *sacra* as well (e.g. lobed, carafe-neck bottles, owl effigy bottles, and more), as well as their highly important decoration through negative painting—may have been brought together with women's roles in the caring and nurturing of their children, the sharing and communication of sacred narratives, and inevitably, the preparation of their deceased children's bodies and the execution of mortuary rituals related to their burials. What else may have been with the female effigy bottle found near Beasley's Bend on the Cumberland when it was found in 1967 we will never know, but given the compelling evidence in Claassen's study of the multiple uses of such places of retreat, it seems safe to suggest that this negative-painted effigy was probably not by itself.

I have called attention to Nelson's and Claassen's studies, because, essentially, my belief is that while we can identify now the production by individual women artists of as many as a dozen or more ceramic female effigy bottles, working in identifiable styles, these women artists were not working in isolation. Instead, their productivity throughout the Mississippian period was undertaken for and supported within communities of other women. The distribution of female effigy bottles and figurines across mound centers and nucleated villages of the Middle Cumberland Region reflects the existence of such social groups as women's sodalities, whose coordinated engagement with these ritual objects knit together their own and satellite communities in mortuary practices that demonstrate their struggle with (increasing rates of) infant and child mortality and their common appeal to a deity who may enable these women to regenerate and recover the souls of their departed children.

As the messages contained in Classic Braden-style shell cups spread out from the American Bottom in the Cahokian diaspora, iconic motifs were transmitted and communicated to the members of women's sodalities, who were the artists and makers of a large part of Middle Cumberland material culture. Two directly related motifs that they embraced are the barred oval and the ogee. The barred oval, as I have described elsewhere, often serves as the nucleus of the ogee, while the ogee motif itself gets abstracted from its strict definition as a serpent-marker, and takes on a larger symbolic role as a portal, expressing the significance of passage between realms, as the snake is known to do (Sharp 2007, 2008, 2016a). Whether these engraved shell cups were

indeed made at Cahokia or made in the Middle Cumberland Region—for example, at Castalian Springs—is uncertain, but what is important to understand is that seminal elements of their designs became associated with and imprinted on the female effigies of the Middle Cumberland Region, where they were then replicated over and over again on effigy bottles and figurines that served some special purposes before ultimately being placed in the graves of children. The intercession of a powerful Earth Mother who could bless and shepherd those women of childbearing years and recycle the souls of their lost infants and children would have both stimulated the women artists who fashioned icons of her and aroused the aid and interest of that larger community of women who shared in the cultic practices devoted to her.

*Notes*:

[1] For the sake of a clear focus on the negative-painted female effigy bottles and figurines, the artists who made them, and their role in the mortuary context of the graves of children, two sets of negative-painted objects contained in earlier presentations of this material (in particular, Sharp 2011) have been eliminated from this paper. These are Group 5—a small set of three humpbacked figurines, all under 10 cm high, from Cain's Chapel at the Noel Cemetery (40DV3); from the Brentwood Library site (40WM210), also known at the Jarman farm; and from the Averbuch site (40DV60); all three from the graves of children—and Group 6—a somewhat larger set of human-head effigy bottles (hooded), negative painted, from Cain's Chapel at the Noel Cemetery (PMAE 78-6-10/14045); from the Jarman farm site in Williamson County; and elsewhere. These two groups remain under study and will doubtless reappear in another assessment of Middle Cumberland material culture.

[2] Other related examples of the compound effigy-on-bottle form are shown in Hathcock 1988:183, Figures 496–497. In addition, the Peabody Museum of Archaeology and Ethnology at Harvard University has a male figure seated atop a rectangular base (95-21-10/48691), from southeast Missouri, as well as a female on a globular base (74-24-10/7776) from a mound near New Madrid, Missouri. In another work from southeast Missouri, a headless, broken figure sits atop—or emerges from—a jar with two handles, in the Peabody Museum (77-38-10/12363).

[3] Another "bead mouth" kneeling female figure—tightly skirted, with her hands on her abdomen—was found by C. B. Moore at the Edward Bonner place in St. Francis Co., Arkansas (Moore 1910:270–271, Figures 4-5). While there are some notable similarities, the relationship between this female effigy bottle and the pair of Group 4 female figurines cannot be explored at this time.

*Acknowledgements.* My work on the Middle Cumberland ceramic effigy vessels and figurines began in 2005 as a study undertaken by a subgroup of participants in the Mississippian Iconographic Workshop at Texas State University–San Marcos. First and foremost, I owe my sincerest thanks to F. Kent Reilly III for the invitation to visit the workshop and test the waters. Kent has been a generous mentor since that time, and in the thirteen years since my first visit to San Marcos, he has become a true friend and colleague. His influence upon me has been profound, and my gratitude is heartfelt. Vernon James Knight, Jr., and George E. Lankford joined me in an investigation of the material culture of the Middle Cumberland Region, and together we began looking at anthropomorphic hooded bottles and figurines from the greater Nashville area, working with available photographs that we could gather or reproduce from other publications or online collection resources such as that of the Peabody Museum of Archaeology and Ethnology at Harvard University and the catalogue of the Gates P. Thruston Collection of Vanderbilt University held in trust by the Tennessee State Museum (Cox 1980). Our efforts yielded a paper published in one of the edited volumes of workshop studies (Sharp et al. 2011), and I am extremely grateful to Jim and George for the opportunity to work with them, learn from them, and be guided by them. They were extremely supportive of my serious interest in this material and my amateur efforts to contribute to the understanding of it. It was a rich privilege and honor to work side by side with two such scholars as Jim and George. Over the past ten years, two other members of the San Marcos workshop, Kevin E. Smith and David H. Dye—both native Tennesseans, as I am—have become important collaborators and close friends. They have

enormously enriched my understanding of the remarkable prehistoric culture of Tennessee and the greater Southeast.

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# PLANTS AND RITUAL: THE BOTANICAL ASSEMBLAGE FROM THE MIDDLE WOODLAND COMPONENTS AT THE YEARWOOD SITE (40LN16), LINCOLN COUNTY, TENNESSEE

**Brian M. Butler and Kathryn E. Parker**

*The Middle Woodland occupation of the Yearwood site has always been of considerable interest because of its ritual character and the presence of various Hopewellian exotics. This paper presents previously unpublished botanical data from that occupation. The botanical assemblage overall is typical of documented Middle Woodland components in the Midsouth and lower Midwest but the association of cultivated seeds with exotic artifacts in certain pit features suggests their involvement in ceremonial feasting. In addition, the occurrence of rare conifer woods in unusual circumstances indicates their association with ritual activity.*

This paper reports the botanical remains recovered from the Middle Woodland components of the Yearwood site (40LN16), a site located on the Elk River in southern Middle Tennessee near Fayetteville (Figure 1). The Yearwood site was the object of a hasty salvage excavation conducted by the Tennessee Division of Archaeology (TDOA) in the summer of 1975. The site was noteworthy for the presence of numerous architectural remains as well as small quantities of Hopewellian exotic materials including copper, galena, mica, quartz crystal, Flint Ridge blades, and fragments of non-local pottery as well as locally produced rocker stamped vessels. Butler published summaries of the Middle Woodland occupation in 1977 and 1979 but a detailed site report was never produced. Recently, however, the site has been reevaluated with the aid of more recent research and new radiocarbon dates. Flotation samples were taken from a number of the Middle Woodland features and processed immediately after the excavation, but they were not fully analyzed until recently. The botanical remains are of special interest because the site was not a typical habitation site but rather a place where people gathered periodically to participate in ritual activities, including mortuary ritual. The exotic materials occur in burials but are also in pits and postholes associated with the habitation area. Walthall (1985) described the site as one example of South Appalachian Middle Woodland ceremonial camps. Indeed, the content of the artifact assemblage strongly resembles that described for the non-mound ritual areas at the Pinson Mounds complex in west Tennessee (Mainfort 2003) as well as the Tunacunnhee site in northwest Georgia (Jefferies 2006).

## Site Description and Excavation

The Yearwood site was located on high ground on the south side of the Elk River across from Fayetteville. (Figure 2). The location is within the southern margins of the Nashville Basin where the tableland of the Highland Rim has been heavily dissected, with its remnants now forming the numerous hills and ridges along the middle and upper Elk River. Within Lincoln County the Elk flows east-to-west in a well-developed meander pattern which is now deeply incised into the landscape. At river mile 90, the Fayetteville area is near the midpoint of

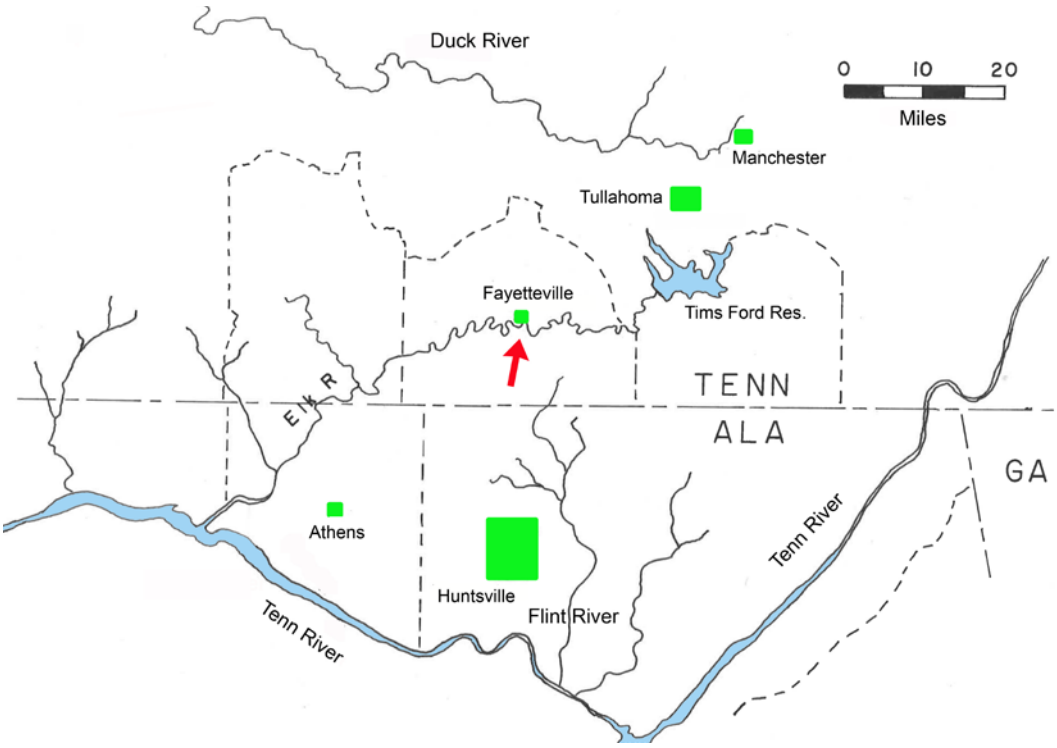


**FIGURE 1. Regional map showing location of the Yearwood site at Fayetteville, Tennessee.**

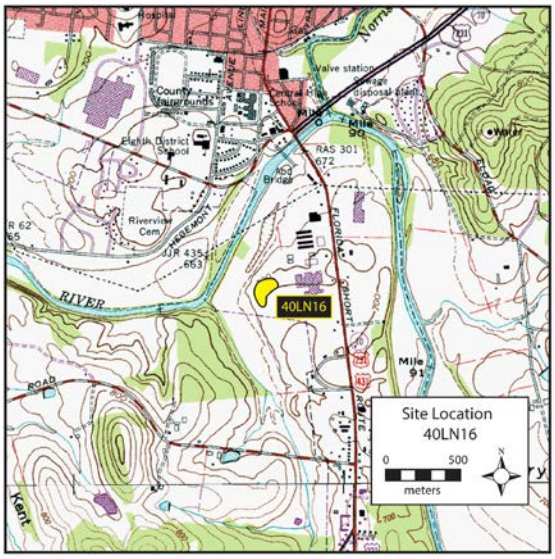


**FIGURE 2. Topographic location of the Yearwood site. Adapted from USGS Fayetteville 7.5-minute quadrangle.**

the 195-mile long Elk River drainage. The extant edge of the southern Highland Rim is located about 5 km south of the site forming a major divide, below which all the drainages flow south, forming the headwaters of the Flint River which enters the Tennessee near Huntsville, Alabama about 60 km to the south.

The site was situated on the west side of a large bend in the river near River Mile 89.2. Within this bend the rolling high ground is actually old terrace deposits laid down by the Elk River before it entrenched to its present level (Wilson and Barnes 1973). The surrounding uplands on both sides of the river are thinly clad bedrock limestone features—knobs and ridges which reach elevations of from 800 to 1000 ft ASL. Soils on and adjacent to the site belong to the Etowah Silt Loam group, which are well drained soils that develop on the old terrace surfaces (Brasfield 2004).

The site occupied the west end of a gently undulating east–west ridge. The artifact scatter comprised a crescent-shaped area that faced north and west.

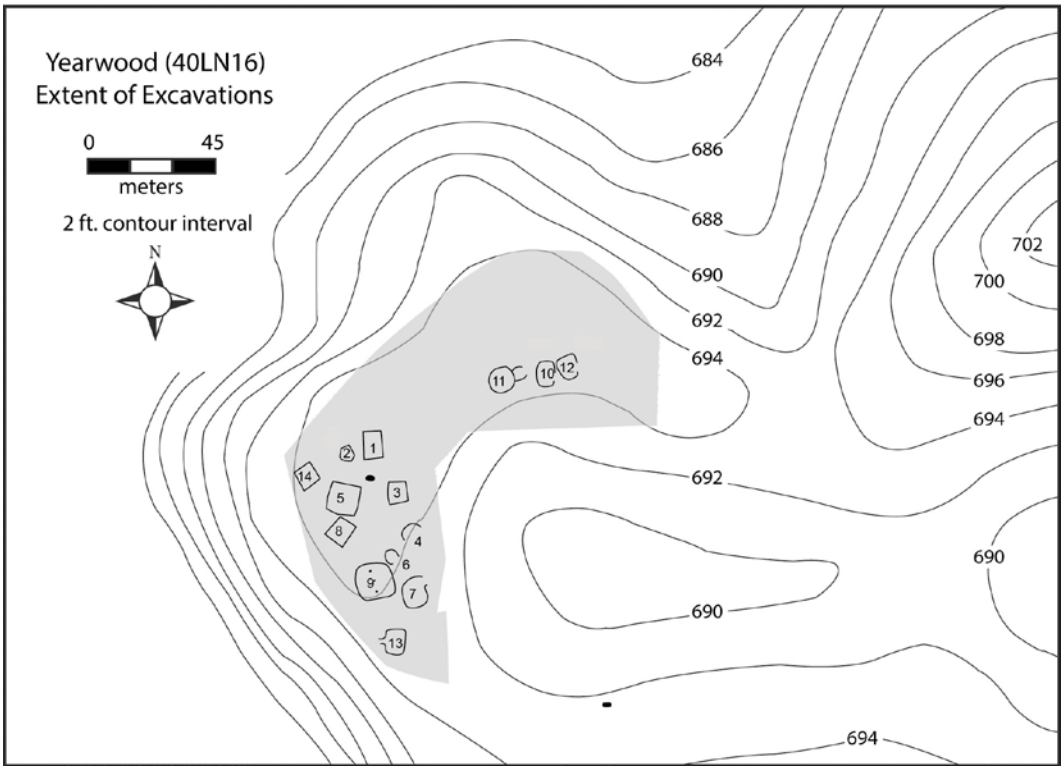


**FIGURE 3. Map of the Yearwood site showing the extent of excavations and locations of numbered Middle Woodland structures.**

To the west the site overlooked the Elk River and a narrow strip of floodplain. The site measured about 140 m long on an east-west axis and about 110 m on a north-south axis with an area of a little over a hectare (2.5 acres).

After some initial shovel testing and test pitting, the site was stripped of its thin plow zone exposing the entire area of about a hectare. The stripping exposed 15 structures (Figure 3), numerous random postholes, and ca. 150 pit features. Five different prehistoric components were represented in the features, although all the structures and the majority of pit features assignable to a specific component were Middle Woodland.

## Cultural Setting

The Middle Woodland occupation at Yearwood is unusual and complex, and key aspects of its interpretation have recently changed (Butler 2016, 2017) and any presentation of the botanical remains must be prefaced with a discussion of the nature of the site. At the time of excavation, it was immediately evident that the Middle Woodland occupation was not a typical Middle Woodland habitation site, numerous examples of which were documented in the nearby Normandy and Tims Ford reservoirs of the upper Duck and Elk rivers (see Faulkner 1988). In the 1970s, Butler concluded that the Middle Woodland occupation was a single phase, relatively brief occupation, dating in the first century AD, wherein all of the architecture was more or less contemporaneous. The site was interpreted as the central location in an otherwise dispersed settlement system of small seasonal and semi-permanent habitations—a site whose principal

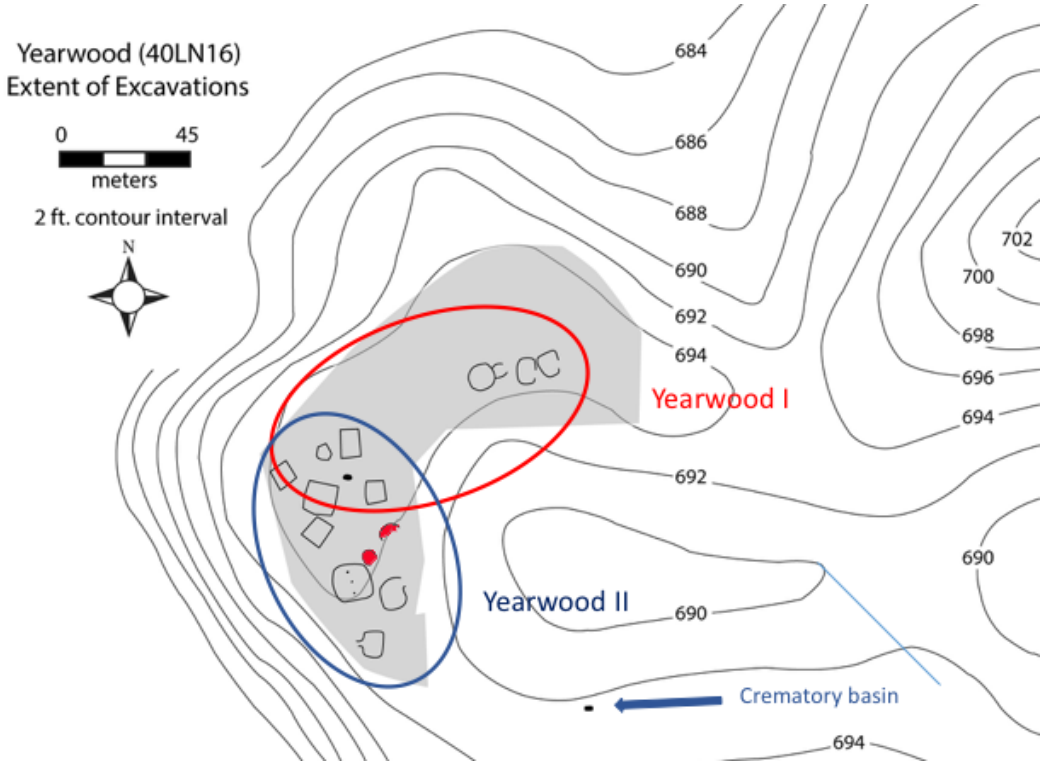


**FIGURE 4. Map of the Yearwood site indicating the rough spatial distribution of the two Middle Woodland components.**

functions were social intensification, trade, and mortuary ritual rather than subsistence tasks.

Recently obtained radiocarbon dates and a revaluation of the records and the original artifact analyses necessitate significant changes in some aspects of the original interpretation. The initial view of the site as a single phase, first century AD occupation was incorrect. The Middle Woodland occupation consists of two separate components, separated in time, but functionally similar in being devoted primarily to ritual and mortuary activity (Figure 4). The earlier component (Yearwood I) is a short-lived McFarland phase mortuary complex concentrated on the northern arm of the site (see Faulkner 1988 and 2002). This is believed to date circa AD 100, although that date is based on the architecture and the reconstructed ceramic assemblage and not on radiocarbon dates. Few pit features can be definitely associated with this use of the site.

The second component, Yearwood II, is a much larger and more complex occupation which dates between AD 300 and 400. It occupied the central and western portions of the site. This later component produced the majority of the architecture, pit features, refuse and the Hopewellian exotics.

The Yearwood I ritual complex consisted of three adjacent structures on the northern arm of the ridge and possibly three semicircular shelters to the south (Figures 3 and 4). The principal structure was Structure 11, a large nearly circular, well-built single post structure (8 m in diameter) with an east-facing covered entry way. It was accompanied by two smaller, oval-to-rectangular buildings (Structures 10 and 12) that were irregular,

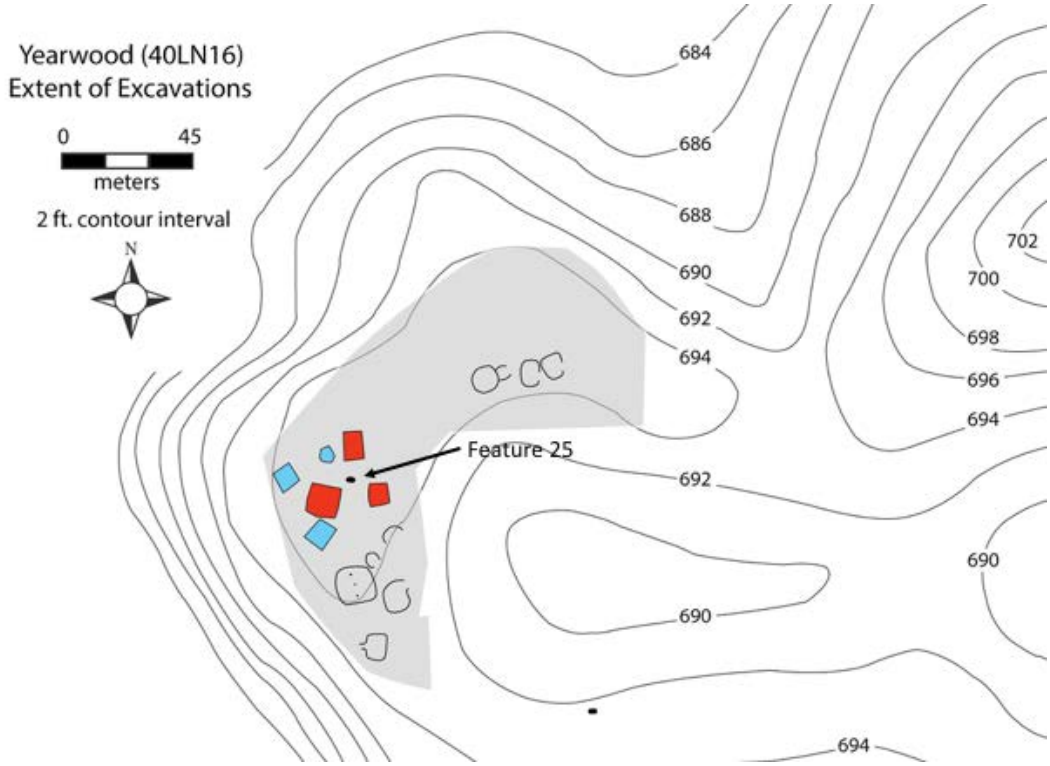


**FIGURE 5. Map of Yearwood site highlighting the ramada structures and the location of Feature 25. Blue indicates the earlier structures. red the later.**

flimsy constructions with large east-facing openings. All three structures lacked discernable internal pit features. There are few pit features near these structures but none with good cultural diagnostics. A scatter of ceramics apparently associated with this complex was located from 20 to 40 m west of these structures, but few pit features can be reliably assigned to this occupation, suggesting that it was brief and involved little time on site. There were also three semicircular shelters in the southern half of the site, Structures 4, 6, and 15. Structure 15 is not shown in Figure 3 as it lies underneath and predates Structure 13. The component assignment of these shelters is not certain but Structure 15 probably belongs to the Yearwood 1 occupation. Structures 4 and 6 could belong to either component.

The Yearwood II complex consisted of a temporary habitation area located in the center of the site and a ritual complex immediately to the south, on the western arm of the site. The central habitation area featured six lightly built ramada structures (Structures 1, 2, 3, 5, 8, and 14) and the majority of the Middle Woodland pit features (Figure 5). The ramadas were brush, matting, or hide-covered canopies, generally rectangular in shape. Four of the six contain one or more hearths. None of the ramada outlines overlapped but the locations suggest that there were two sequential sets of three each, with the later one positioned around a small open area, at the center of which was a very large refuse-filled basin, Feature 25.

The ritual complex was immediately south of the habitation area and, like the Yearwood I complex, consisted of three buildings. The principal structure (Structure 9) was a large square building, roughly 11 m across with two east facing entrances and a possible third in the

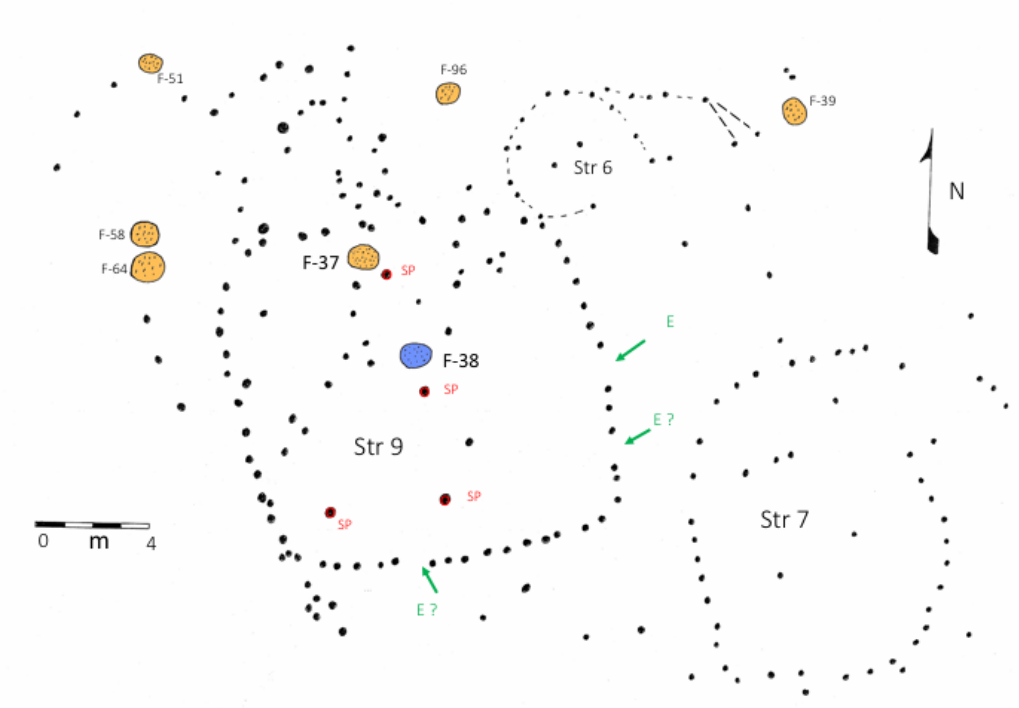


**FIGURE 6. Map of Structures 9 and 7 with associated and adjacent pit features. "SP" indicates large support posts and "E" possible entrances of Structure 9. Structure 6 may or may not be associated with Structure 9.**

south wall (Figure 6). Unlike the earlier Yearwood I buildings, this structure had two internal features, an empty storage pit (Feature 38, indicated in blue) near the center of the building and a large basin hearth or cooking feature (Feature 37) located near the north wall. Immediately east of Structure 9 was a flimsily built oval, single post building (Structure 7, 11x8.5 m) with a large east-side opening and no internal features. Immediately south was Structure 13, a smaller but better-built, roughly rectangular structure (9x7 m), also lacking internal features but with a small covered entrance extending from the west side.

There is little evidence as to the actual functions for any of these structures. The larger formal single post buildings may be mortuary shrines but whether they contained bodies or were simply the place where certain rites were performed is unknown. The very large Structure 9 may have filled multiple functions with regard to group ritual. The accompanying irregular buildings may be places where portions of certain rituals occurred or perhaps where participants were kept in seclusion for brief periods, but the lack of any substantial provision for heat or cooking inside suggests that their use was brief.

The architecture at Yearwood, especially the flimsy, open-sided shelters found in the central habitation area and the almost total absence of internal hearths in the more formal structures, strongly suggests that the use of the site was brief and limited to the warmer months, perhaps totaling only a few weeks out of the year. There is no way to tell if the site was occupied more than once in any given year, or for that matter, if it was used every year. The large well-built single post structures at the center of both ritual complexes were not rebuilt;

**TABLE 1. Feature Data and Flotation Sample Size.**

| Feature | Form | L[1] | W | Depth[2] | Sample (Liters) | Function |
|---|---|---|---|---|---|---|
| 4 | Shallow basin | 53 | 48 | 10 | 13.2 | Hearth |
| 5 | Deep basin | 120 | 120 | 30 | 25.4 | Earth oven |
| 14 | Shallow pit | 92 | 84 | 13 | 13.2 | Hearth |
| 17 | Deep basin | 160 | 140 | 32 | 26.4 | Shallow Earth Oven |
| 18 | Deep pit | 65 | 65 | 30 | 13.2 | Hearth or small earth oven |
| 25 | Shallow basin | 275 | 230 | 20 | 26.4 | Fire pit and refuse disposal |
| 26 | Deep basin | 150 | 150 | 38 | 13.2 | Earth oven |
| 27 | Deep pit | 85 | 85 | 110 | 26.4 | Storage pit w burial |
| 37 | Deep basin | 110 | 100 | 30 | 13.2 | Interior Hearth |
| 38 | Deep pit | 110 | 100 | 55 | 26.4 | Storage pit |
| 48 | Shallow basin | 60 | 50 | 17 | 13.2 | Interior hearth |
| 51 | Shallow pit | 85 | 76 | 22 | 13.2 | Exterior hearth |
| 65 | Deep pit | 100 | 100 | 50 | 13.2 | Earth oven |
| 67 | Shallow basin | 90 | 0 | 20 | 13.2 | Exterior Hearth |
| 113 | Shallow basin | 65 | 60 | 16 | 13.2 | Redeposited cremation |

[1] Dimensions in cm.
[2] Depth given from stripped surface, ca. 20 cm below ground surface.

**TABLE 2. Temporal and Spatial Association of Features and Summary of Contents**

| Feature | Spatial Association | Component | Total Seeds | Total EC | Dominant |
|---|---|---|---|---|---|
| 4 | Inside Structure 1 | II | 48 | 33 | Chenopodium |
| 5 | Close to Structure 1 | II | 60 | 49 | Chenopodium |
| 14 | Central site area (LW pits) | I or II | 10 | 7 | Maygrass |
| 17 | Adjacent to Structure 14 | II | 30 | 29 | Cheno-May |
| 18 | Between Structures 1 and 2 | II | 2 | 0 | |
| 25 | Center of the area of ramadas | II | 184 | 142 | Maygrass |
| 26 | Adjacent to Structure 5 | I or II | 1 | 0 | |
| 27 | Adjacent to Structure 5 | II | 1 | 1 | Hordeum |
| 37 | Inside north wall of Structure 9 | II | 271 | 137 | Chenopodium |
| 38 | Near center of Structure 9 | II | 3 | 1 | Chenopodium |
| 48 | Northwest corner of Structure 5 | II | 0 | 0 | |
| 51 | Near southeast corner of Structure 8 | II | 0 | 0 | |
| 65 | West of southwest corner of Structure 8 | II | 13 | 5 | Chenopodium |
| 67 | West of Structure 5 | II | 1503 | 1491 | Chenopodium |
| 113 | South of Structure 10 | I or II | 14 | 3 | Chenopodium |

thus, the total use of the site during each component was likely no longer than the lifespan of the principal structure. The Yearwood I use of the site appears to have been of short duration, suggesting that people visited for a very specific purpose. Their stay was never long enough to require building substantial shelters or extensive processing of food. A scatter of ceramics assignable to this occupation existed west of the three primary structures but few if any pit features can be unequivocally linked to this component. The Yearwood II use of the site was both more extensive and intensive than the Yearwood I occupation, involving camping on-site in canopy-like shelters with hearths, as well as the necessary food processing and cooking installations. Notably lacking were storage pits, of which only two were identified, and both with either unusual contents or placement.

A majority of botanical remains recovered clearly relate to the Yearwood II component. Three sampled pits, Features 14, 26, and 113, could belong to either the Yearwood I or the II component, based on the lack of diagnostics for the later occupation. All three pits, however, produced few seeds or other distinctive macrobotanical remains, and their impact

**TABLE 3. Summary of Identified Wood**

| Wood Type | Number of Fragments | Percentage |
|---|---|---|
| *Acer* sp. (maple) | 7 | 3.83 |
| *Carya* sp. (hickory) | 55 | 30.05 |
| *Fraxinus* sp. (ash) | 7 | 3.83 |
| *Gleditsia triacanthos* (honey locust) | 11 | 6.01 |
| *Juglans* sp. (black walnut/butternut) | 1 | 0.55 |
| *Juniperus virginiana* (Eastern red cedar) | 13 | 7.10 |
| *Quercus* sp. (oak) | 51 | 27.87 |
| Q. sp., subgenus *Erythrobalanus* (red oak group) | 31 | 16.94 |
| Q. sp., subgenus *Lepidobalanus* (white oak group) | 6 | 3.28 |
| Ulmaceae (elm family) | 1 | 0.55 |
| **Total** | 183 | 100.00 |

on taxonomic diversity is negligible. Thus, the assemblage described here is primarily associated with Yearwood II, a Late Middle Woodland ceremonial encampment dating approximately cal AD 350.

## Samples

Flotation samples were collected from fifteen Middle Woodland features, a 28.8% sample of the 52 pit and mortuary features assigned to that occupation. The samples were processed at the TDOA offices in Nashville and curated without analysis. In the late 1970s Neal Lopinot (Missouri State University) partially sorted and identified plant materials from several of the richer samples, but, for the most part, the processed Yearwood flotation samples were undisturbed in storage until 2014. Descriptive data on the sampled features are given in Tables 1 and 2. The flotation samples totaled 264 liters of processed fill. The basic unit of sample was a standard 12-quart bucket and the two different sizes of flotation samples reflects the difference between one-bucket samples (13.2 l) and two-bucket samples (26.4 l).

## Results of Botanical Analysis

Charred macrobotanical remains in the samples consisted of wood, nutshell, seeds, and miscellaneous items such as cucurbit (*Cucurbita pepo*) rind and giant cane (*Arundunaria gigantea*) stem. At least 32 different plant taxa were represented, providing data significant for interpreting subsistence activities at the Yearwood site in regional Middle Woodland cultural context.

### *Wood*

All fifteen features produced charred wood in flotation samples, for a total of 10,790 fragments (113.88 g) (Table 3). Despite general feature ubiquity and wood concentrations in a few deposits, the mean density overall was low, 0.4 g/ liter by weight. Without high wood frequencies (1.0 to 2.3 g/liter) in Features 37 and 38 samples, and in Feature 27 lower fill zone, overall density figures would have been lower still. In 183 wood fragments that were identified, oak (*Quercus* sp.), especially red subgroup (*Q*. sp., subgenus *Erythrobalanus*), but also white subgroup (*Q*. sp., subgenus *Lepidobalanus*),

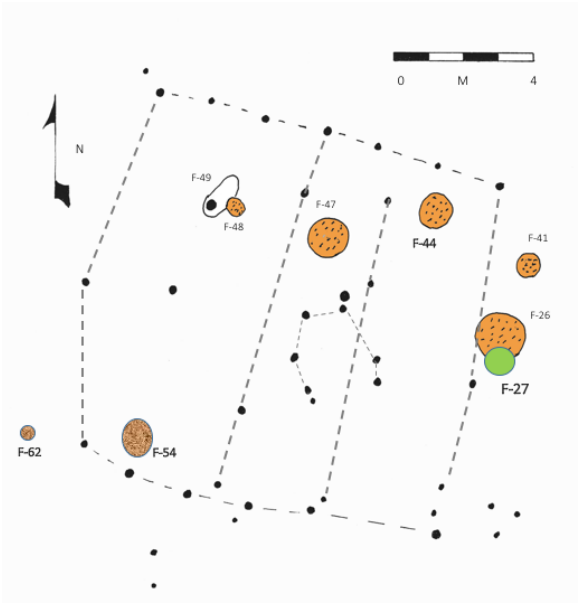


**FIGURE 7. Map of Structure 5 showing Feature 27 (in green).**

predominated, followed by hickory (*Carya* sp.), Eastern red cedar (*Juniperus virginiana*), honey locust (*Gleditsia triacanthos*), maple (*Acer* sp.), ash (*Fraxinus* sp.), black walnut/ butternut (*Juglans* sp.) and elm family (Ulmaceae). Oak and hickory, local upland forest dominants, comprised 70.8% of fragments, with one or the other (and sometimes both) occurring in every sample with identifiable wood. Clearly collection practices focused on these two tree taxa. Like oak and hickory, red cedar is primarily a tree of dry uplands, often a successional species on recently cleared areas. All other wood types identified (honey locust, maple, etc.) would have been available on Elk River terraces and valley slopes.

Red cedar was recovered from two pits, but primarily from Feature 27, at the eastern edge of Structure 5. It was defined as a deep storage facility that was subsequently repurposed (Figure 7). Two flotation samples were recovered from Feature 27's primary fill of limestone rock, ash, and charred wood. The lower sample yielded a mass (22.83 g) of carbonized wood in 13.2 liters that included a small amount of oak, along with red cedar, and unknown conifer. A subsample (ca. 4.5 g) of the unknown conifer was sent to wood taxonomy expert, Lee Newsom, who identified it as Eastern hemlock (*Tsuga canadensis*). Following Newsom's determination, all of the small conifer wood fragments from the upper Feature 27 sample were re-examined and found to incorporate three separate taxa: red cedar, hemlock, as well as pine (*Pinus* sp.).

In this region of south-central Tennessee, Eastern hemlock is near the southern limit of its range, and is a tree of high elevations and cool, shady microclimates such as north-facing slopes. As fuel, hemlock when dry burns quickly to ash, leaving few coals, and has a pleasant aroma while burning. Native species of pine: loblolly (*P. taeda*), short leaf or yellow pine (*P. echinata*), and scrub or Virginiana pine (*P. virginiana*) are all highly adaptable to varying soil and moisture conditions. Thus, while red cedar and hemlock woods in Feature 27 most likely were collected from quite dissimilar habitats, pine would have been more generally available. Notably, however, only a single case of positively identified pine wood was found in all of the Normandy Reservoir flotation analysis, and that from a deep McFarland phase pit (Crites 1978: 107).

### *Nutshell*

Remains of nut masts totaled 13,137 fragments (220.0 g), consisting mainly of thick-shelled hickory (*Carya* sp.), accompanied by lesser amounts of acorn (*Quercus* sp.), and then by black walnut (*Juglans nigra*), butternut (*J. cinerea*), and hazelnut (*Corylus americana*) (Table 4).

**TABLE 4. Summary of Identified Nutshell.**

| Nut Type | Number of Fragments | Percentage |
|---|---|---|
| *Carya* sp. (hickory) | 12197 | 92.84 |
| *C. ovata* (shagbark hickory) | 1 | 0.01 |
| *Corylus americana* (hazelnut) | 5 | 0.04 |
| *Juglans cinerea* (butternnut) | 1 | 0.01 |
| *J. nigra* (black walnut) | 197 | 1.50 |
| *Quercus* sp. (acorn) | 736 | 5.60 |
| **Total** | 13137 | 100.00 |

One nearly complete hickory nut from Feature 67 was identifiable as shagbark (*C. ovata*). The majority of thick shell fragments in all fifteen Yearwood Middle Woodland samples may also be shagbark. Hickory nutshell was recovered from every analyzed feature, often in concentrations of 1.0 to 2.5 g/ liter. Hickory nuts would have provided an enormous edible biomass for visitors and residents of the Yearwood site. However, acorns may well have been equally important, or even more important than hickories in local Middle Woodland diets. Acorn nutshell and cotyledon fragments, although recovered at lower frequency than hickory, were nonetheless present in all except two of the analyzed samples, and unquantified fragments were also noted consistently in the small (<2.0 mm) fraction. Because the thin, fragile shells are less likely to survive burning than those of dense hickory and walnut, acorns may be under-represented in this and other archaeobotanical assemblages. Three nearly intact cotyledons from Feature 67 (deposit with complete shagbark hickory nut), most closely resembled modern comparative specimens of white oak acorns.

The recovery of cotyledons, the edible portion of the acorn fruit, offers direct evidence for harvest and processing by a visiting Middle Woodland group. Black walnut, recovered from five features, but primarily from Features 4 and 113, would have been available at about the same time as hickory nuts and acorns. However, unlike the forest dominants, hickory and oak, black walnut and butternut trees tend to occur as solitary or a few individuals, and did not produce a useable biomass equivalent to hickory and acorn. Hazelnuts presumably grew in nearby shrub thickets bordering open areas and the Elk River. Middle Woodland foragers presumably could have harvested the nuts easily, but faced intense competition from squirrels and a host of other mammals. A review of prehistoric assemblages from this region shows that hazelnut has consistently been a minor part of nut remains relative to hickory, acorn and walnut (cf. Cridlebaugh 1981; Crites 1978; Kline et al. 1982).

### *Seeds*

Samples from thirteen features yielded 2146 seeds, 2051 of them identifiable and therefore significant for purposes of interpreting Middle Woodland economic strategies and uses of plants at Yearwood (Table 5). Most specimens represent edible resources, especially the group of Eastern Complex starchy cultigens: chenopod (*Chenopodium berlandieri*), erect knotweed (*Polygonum erectum*), and maygrass (*Phalaris caroliniana*). Little barley (*Hordeum pusillum*), fourth in the quartet of cereal grains, was a minor presence here with a single seed recovered from Feature 27. In addition to products of gardening/farming, seeds of several fleshy fruits and berries provide evidence for exploitation of wild plant foods in addition to nuts.

Chenopod seeds numbered 1154, approximately 57% of those identified. Better-preserved chenopod seeds

**TABLE 5. Summary of Identified Seeds.**

| Seed Type | Number | Percentage |
|---|---|---|
| *Amaranthus* sp. (pigweed) | 89 | 4.34 |
| *Chenopodium berlandieri* (chenopod) | 1154 | 56.27 |
| *Crataegus* sp. (hawthorn | 1 | 0.05 |
| *Desmodium* sp. (tick trefoil) | 4 | 0.20 |
| *Diospyros virginiana* (persimmon) | 4 | 0.20 |
| Fabaceae (bean family) | 2 | 0.10 |
| *Galium* sp. (bedstraw) | 3 | 0.15 |
| *Hordeum pusillum* (llittle barley) | 1 | 0.05 |
| *Passiflora incarnata* (passionflower) | 1 | 0.05 |
| *Phalaris caroliniana* (maygrass) | 213 | 10.39 |
| *Phytolacca americana* (pokeweed) | 9 | 0.44 |
| Poaceae (grass family) | 1 | 0.05 |
| *Polygnum* sp. (smartweed) | 3 | 0.15 |
| *Polygonum* sp. (non-erectum knotweed) | 9 | 0.44 |
| *P. erectum* (erect knotweed) | 530 | 25.84 |
| *Prunus* sp. (plum) | 1 | 0.05 |
| *Rhus* sp. (sumac) | 7 | 0.34 |
| *Sambucus canadensis* (elderberry) | 3 | 0.15 |
| *Vitis* sp. (grape) | 16 | 0.78 |
| **Total** | 2051 | 100.00 |

examined at 30x, including 950 large specimens from Feature 67, were biconvex in cross-section with thick testae, consistent with wild *Chenopodium berlandieri*. However, instead of roughened, pitted testae surfaces, characteristic of the wild form, intact specimens were noticeably smooth, a trait that is typical of domesticated *C. berlandieri* ssp. *jonesianum*. Chenopod seeds from two other Yearwood Middle Woodland pits, Features 4 (Structure 1) and 37 (Structure 9), were similarly large and rounded, and retained thick smooth testae that lacked surface punctations. Varying combinations of wild and domesticated morphological traits in prehistoric chenopod have been used to define seeds as cultivated products, intermediate in form between clear domesticates and fully wild populations (see, for example, Crites 1987; Fritz 1997; Gremillion 1997; Smith 1985).

A total of 530 erect knotweed seeds, some notably large (ca. 2.5 mm in length), were recovered from Feature 67, the only occurrence among the sampled features. Erect knotweed was not present in any other Middle Woodland samples. The Feature 67 specimens included a mix of two recognized morphological types; one that is squat and terete in outline with a roughened thick pericarp, and another that is slender and elongate with a papery thin, smooth pericarp. Both types can occur on the same plant, the second elongated slender morph becoming more prevalent as the season progresses (D. and N. Asch 1985; Fritz 1997). In the American Bottom and adjoining regions, a late prehistoric trend toward numerical dominance of large slender achenes with thin pericarps has been interpreted as evidence of knotweed domestication (cf.

Dunavan 1993; Mueller 2016; Simon and Parker 2006). Throughout earlier prehistory, however, botanical assemblages with *P. erectum* are similar to Yearwood, incorporating naked kernels as well a variable mix of the two achene types.

Maygrass seeds (*n*=213) typically were present in the same samples with chenopod. The co-occurrence of two Eastern Complex cereals from opposite ends of the harvest season, spring and late summer or fall, implies that crops from multiple seasons were stored and/or prepared in tandem.

Wild seasonal sweet or sour fruits were represented by a total of 32 seeds from persimmon (*Diospyros virginiana*), hawthorn (*Crataegus* sp.), maypops (*Passiflora incarnata*), plum (*Prunus* sp.), sumac (*Rhus* sp.), elderberry (*Sambucus canadensis*), and grape (*Vitis* sp.). All are in a group of fruit seeds identified often in prehistoric assemblages from the Southeast and lower Midwest. Based on frequency of archaeological seed recovery, and on ethnohistoric records for general Native American harvesting and use, all of these fruits and berries were most likely viewed as potential food by Middle Woodland people at Yearwood.

Charred and eroded giant ragweed (*Ambrosia trifida*) achenes totaled 50, all recovered in a single 13.2-liter sample from Feature 113, a redeposited cremation. Each hard, thick-walled achene measured slightly above 4.0 mm in length. There were no ragweed seeds without pericarps possibly because the seeds had shriveled inside the pericarps and fallen out, or were reduced to dust during carbonization, leaving only the hard outer shell. Recovery patterns from a number of prehistoric components, most of them dating to Archaic and Early Woodland periods, have demonstrated that giant ragweed seeds were either actively gathered from wild stands, or the plants were grown as part of Eastern Complex crop production systems in some locales (Asch and Asch 1985; Cowan 1985: 214-216; Fritz 1994, 1997; Simon and Parker 2006; Yarnell 1993). However, the cumulative botanical record also suggests a decline in ragweed seed recovery postdating the Early Woodland period, perhaps indicating a resource that gradually fell into disuse.

Other seeds from plants of uncertain significance for people at the Yearwood Site include pigweed (*Amaranthus* sp.), tick trefoil (*Desmodium* sp.), small unknown members of the bean family (Fabaceae), bedstraw (*Galium* sp.), pokeweed (*Phytolacca americana*), smartweed and non-erectum knotweed (*Polygonum* spp.), and nondescript grass family (Poaceae). Collectively, this group of seeds accounted for nearly 6.0 percent of all those identified, although pigweed alone (89 seeds from Feature 37) comprised approximately 4.0 percent of the total.

All of these plants, with the possible exception of unknown grasses, would have been normal constituents of commensal (weedy) vegetation in the vicinity of pits and structures, aided by human disturbance. Pigweed, bedstraw, and pokeweed, in particular, have documented potential as sources of food, medicine and/or dye, whether or not Yearwood Middle Woodland groups used them (cf. Gilmore 1977; Jakes and Erickson 2001; Moerman 1986; Yanovsky 1936). The 89 pigweed seeds from Feature 37 are their only occurrence in the assemblage, and their presence in a feature inside of the large central Structure 9, suggests some use in activities taking place there.

### *Miscellaneous Plant Materials*

A catchall category of miscellaneous botanical materials totaled 575 items. Stems of giant cane (*Arundinaria gigantea*) were by far the most abundant, numbering 456. Similar stems of cane and other grasses are a constant in Middle Woodland and later prehistoric assemblages, reflecting items that were essential to the formation of storage pit lining, matting, structural thatch and basketry. Charred intact thatching remnants are occasionally recovered from burned late prehistoric structures (e.g. Brennan 2007; Parker 2005; Simon 2002; Simon and Parker 2006). Grass lined storage pits have also been reported (Fritz 1993, Gremillion 1997).

At Yearwood, with two major exceptions, Middle Woodland features yielded little or no cane stems. A mass of charred cane was recovered from Feature 37, a large basin hearth or fire pit located inside the north wall of Structure 11 (Figure 6). Large quantities of charred cane were present along with a small section of loose weave cane matting, which could not be recovered intact. The burned matting and abundant fragments of large wood timbers, 10 to 12 cm in diameter, suggest that this hearth or pit was open when the structure was incinerated.

Thin, eroded cucurbit (*Cucurbita pepo*) rind fragments were recovered from three features (25, 37, and 65) for a total of fourteen. Rind, and more rarely, seeds or fruits of cucurbit have been associated with other Middle Woodland components in the south-central Tennessee region and elsewhere (see, for example Crites 1978; Kline, Crites and Faulkner 1982; Parker 2005; Scarry 1990: Table 25). The primary value in small gourd-like *C. pepo*, ssp. *ovifera*, var. *ovifera* squash presumably was in the protein rich oily seeds, even though both the fruits and seeds are extremely bitter due to the presence of chemical cucurbitacins. Experimental research by Hart (2004) has demonstrated that seeds of *C. pepo*, ssp. *ovifera*, var. *ovifera* are made palatable through boiling and soaking in water, a leaching process that removes the bitter compounds. It is also possible that prehistoric *C. pepo* growers developed less bitter local variants in this genetically malleable species.

Among other miscellaneous items were glossy irregularly-shaped fruiting tissue, clumps of syrup-like processing residue, hull or husk, small buds, gracile dicot stem, and fungal tissue of a type associated with decaying wood. All of these remains are commonly present in Woodland and later prehistoric flotation samples.

### The Role of Plants in Ritual Behavior

As we have noted, the Yearwood Middle Woodland components are believed to reflect warm-weather, short-term, occupations that were primarily devoted to ritual or ceremonial events. As such the site offered the prospect of assessing whether or to what extent the plant residues might reflect ritual behavior. In fact, the Yearwood botanical assemblage overall proved to be typical of documented Middle Woodland components throughout the Midsouth and lower Midwest. In this context we need to revisit our use of “warm weather” and “short term” — vague terms that require some clarification. The architectural evidence, consisting of flimsy tent-like shelters, irregularly built single post buildings with large wall openings, and the almost total lack of hearths in the more formal single post structures is strongly

supportive of warm weather occupation. Spring and early summer, with their dearth of plant food resources (except maygrass) seem an unlikely time for communal gatherings devoted to social activities unrelated to food production. Late summer and fall would seem more realistic, especially after the major harvesting of seed grains and nuts. Of course, the site may have been visited more than once in any given year.

The length of the individual occupations can only be inferred but the architecture again supports the inference of relatively short duration—tent-like shelters, sloppily built, irregular single post structures and the dearth of storage pits. That said, gatherings at this site could have lasted for several weeks with the concomitant needs for provisioning and food preparation facilities. We suspect that some of the charred botanical remains represent residues of processed food stocks brought to the site for cooking rather than harvested and processed on-site. This pertains specifically to cultivated grains. Given the varied ripening periods of individual stands, however, it may still have been possible to harvest additional grain near the site. Nut masts and some fruits may also have been available. Thus, with what food stocks could have been brought in and what could be harvested in the vicinity of the site, the plant food residues of the site might not have differed significantly from those recovered from domestic habitation sites.

The emphasis on ritual activity, however, can be seen in certain aspects of the plant remains identified and the contexts in which they occurred. Seeds of edible or otherwise useful plants were predominantly those of Eastern Complex crops, but there were some distinct anomalies in the distribution of Eastern Complex seeds across the site. Generally, seed counts in individual features were modest but Feature 67 was a significant exception. Feature 67 was a shallow circular basin located west of ramada structures 5 and 8. The walls showed no evidence of firing but the feature contained large amounts of charred plant material and other refuse, as well as bits of mica. Nut residues were abundant but what makes this hearth or cooking feature unusual was the high seed density. A single 13.2-liter sample produced 1503 seeds, or 70% of all the seeds recovered from the Middle Woodland component. Identified specimens were primarily the Eastern Complex starchy cultigen, chenopod (950 seeds), followed by erect knotweed (350 seeds), the only occurrence of this cereal grain in the Middle Woodland assemblage. Other taxa in the Feature 67 sample included a few seeds of maygrass, plum, sumac and grape. More broadly, it is important to note that the three sampled pit features with the highest numbers of Eastern Complex seeds—Features 25, 37, and 67—were also the only ones containing squash rind.

These three features all contained exotic materials or artifacts. Feature 25 was a large (ca. 2 by 3 m) shallow basin centrally located in the open space framed by three of the Yearwood II ramadas (Figure 4). Feature 25 was packed with animal bone and artifacts suggestive of feasting remains with participants gathering up large loads of refuse and filling the basin prior to departing the site. The fill contained broken rocker stamped pottery, 16 projectile points and fragments, eight microblades, numerous chipped stone stone tools, two repurposed axe heads, scraps of mica totaling 10 g, and a chunk of quartz crystal, in addition to red cedar

wood. Feature 37 yielded four large smooth quartz pebbles, an axe head made of rare red, hematite-rich sandstone, and fragments of three rocker stamped vessels. And as noted above, Feature 67 contained bits of mica among the refuse. Collectively, the food remains (cereals and fruits), and the inclusion of various exotics suggest redeposited residues of feasting or similar celebratory events.

One of the redeposited cremations also contained unusual plant remains, 50 achenes of giant ragweed. These seeds derive from weedy plants, but their inclusion in the carefully gathered cremains can hardly be incidental. Cumulative archaeobotanical data from Middle and Late Archaic components in the lower Midwest/ Southeast region suggests that giant ragweed was encouraged or tended as a source of oily seeds (see, for example Asch and Asch 1985; Fritz 1993; Gremillion 1993; Parker 2006; Simon and Parker 2006; Yarnell 1993). Whereas other oil seed plants: common sunflower, sumpweed and cucurbits, went on to become cultigens/ domesticates in the Eastern Agricultural Complex, active ragweed use apparently declined during the Early Woodland period and eventually ended. In the context of a shared memorial event at Yearwood, a re-deposited cremation, ragweed seeds may have been among recognized symbols of ancestral lifeways.

Wood remains at Yearwood present the most unusual associations. As noted above, red cedar wood was recovered from only two features, each of them unique in some way. The majority of cedar was recovered from Feature 27, located immediately adjacent to the east edge of the largest ramada, Structure 5. In form the feature is an obvious storage pit, with diameters of 0.95 and 0.87 m and a depth of 1.3 m with slightly undercut lower walls. It was filled with massive quantities of charred wood and burned limestone rock from a large fire pit or earth oven. Feature 27 showed no evidence of firing. The absence of firing, plus the relatively small diameter of the pit relative to its great depth makes Feature 27 an improbable earth oven. The disarticulated remains of an infant were included in the first loads of material put into the empty pit. The fact that the remains were disarticulated indicates that they had been defleshed before being placed in the pit. The bones were in good condition and were determined to be the remains of an infant of 6 to 18 months of age (Breitburg n.d.).

After being filled, the center of the pit was later dug out, creating a deep cylindrical feature about 0.85 m across at the surface and 0.55 m deep with a strongly rounded bottom. This intrusion had an outer ring of light colored soil surrounding a very distinct fill of compact dark greasy soil about 0.6 m in diameter and 0.45 m deep. The later intrusion clearly reflects a different use of the feature but one that occurred soon after the pit had been filled with burned wood and rock. The intrusion is almost perfectly centered on the initial pit, meaning that the larger feature was visible and was known to the excavators. Archaeological evidence suggests that the Feature 27 pit fill represents ritual activity.

Composition of the charred wood from Feature 27 is highly unusual. Oak and hickory have consistently been the dominant wood taxa reported from Middle Woodland components in south-central Tennessee, accompanied by secondary taxa such as sassafras, elm, basswood, honey locust, with occasional pine and less often, red cedar (cf. Crites 1978; Parker 2016; Shea 1978). The burned

wood from Feature 27 consists largely of three different conifer taxa—hemlock, red cedar, and pine.

Re-deposited wood in the lower flotation sample was primarily Eastern hemlock, a native tree but not a common one. A review of regional paleoethnobotanical data with identified wood (e.g. Cridlebaugh 1981; Crites 1978; Kline et al. 1982) found no mention of hemlock. In addition to hemlock, two other conifers, pine and red cedar, were also present in this lower sample, along with one fragment of oak. The choice of three different conifer woods as fuel associated with the burial of an infant has ceremonial overtones. It is not clear, however, whether this was a burial ritual for the infant or a different event wherein the infant remains were incorporated but were not the primary focus of the ritual.

Any one of the three conifers may have been selected because of the pleasant aroma while burning, and/or because of the evergreen growth habit. Two of them, hemlock and red cedar, have additional inherent properties that led to their widespread use among historic indigenous populations as medicinal and/or sacred substances.

In the case of hemlock, it is both an evergreen and rare at the southern limits of its range in south-central Tennessee. Northern and Midcontinent ethnohistoric sources record Native American medicinal use of inner bark (powdered), roots, and/or needles of hemlock as a tea or infusion for treatment of intestinal disorders, rheumatism, respiratory conditions, and also externally as an antiseptic and analgesic (Arnason et. al 1981; Moerman 1986:490-492; Yanovsky 1936:7). Perusal of the current electronic marketplace further reveals that hemlock essential oil is offered as an alternative herbal therapy for many of these same conditions (www.aromatics.com/products/hemlock-essential-oil, accessed June 24, 2018).

Red cedar, when reported, has typically been a minor percentage (less than 1.0%) of wood identified from Middle Woodland components in the Midsouth and lower Midwest (Crites 1978; Shea 1978). There have been sporadic contexts in which cedar is the dominant wood, among them, a single McFarland phase Early Middle Woodland pit at the Parks site, excavated in the Normandy Reservoir Project (Crites 1978:107). In a second example, from the Late Middle Woodland component at the Williams Spring site in north Alabama, two conifers, red cedar and bald cypress (Taxodium distichum) were dominant in lower levels of one excavation unit. In the Parks site example, cedar did not appear linked to ritual behaviors. At the Williams Spring site in north Alabama, such an association was suspected based on Middle Woodland burials in the same area, but could not be conclusively demonstrated (Parker 2016). Notably, the only other red cedar found at Yearwood was in the previously described Feature 25.

In sum, the Eastern Complex apparently played no active role in ritual other than being foodstuffs consumed in feasting. This is in agreement with Scarry's (2010) observations on the plant remains from the Leake site, a large Middle Woodland ceremonial complex in northwest Georgia, noting that Eastern Complex grains did not appear to have any specific ritual implications other than their inclusion in feasting events. Certain rare or culturally significant woods, on the other hand, appear to have been specifically selected for use in ritual events. In the Yearwood case, conifers—red cedar, hemlock, and pine—were burned as a part of ritual activity.

*Acknowledgements*. We would first like to acknowledge the role of the late Will Bacon in the present effort. He was the stimulus for a wide-ranging review and updating of the Yearwood materials. Will's assistance and encouragement turned what was originally intended to be a limited study of the Early Woodland component into a full review of the previously published components, especially the Middle Woodland occupation. Will even paid for a series of new radiocarbon dates that helped revise the site chronology. We would also like to thank Michael Moore and various staff members of the Tennessee Division of Archaeology who provided access to the collections and assisted the project in various ways, including paying for two new radiocarbon dates. Their interest in reviving and supporting such an old project was refreshing and greatly appreciated. Lee Newsom of Flagler College is thanked for her identification of the rare hemlock wood from the site. Figures 2 and 3 were prepared with the assistance of Keith Little of Tennessee Valley Archaeological Research.

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# PREHISTORIC ROCK ART RESEARCH IN TENNESSEE 2008

**Jan F. Simek, Joseph C. Douglas, Sarah C. Sherwood, and Alan Cressler**

*Over the course of 2008, eight new prehistoric rock art sites, two in caves and six in the open, were discovered by the UT Cave Archaeology Research Team working with colleagues from the University of the South, Volunteer State Community College, and the National Forest Service. Among these is a rock art site just north of the state line in Kentucky which we discuss because we believe it relates to rock art sites in Tennessee. New data were also obtained on several other already-known cave art sites. This paper reports on the 2008 UT CART research on these rock sites.*

***[Editor's Note: In the following text, comments added to the original 2009 presentation from the perspective of 2019 are indicated by italics].***

*For many years, the Cave Archaeology Research Team (CART) at the University of Tennessee, Knoxville, has made annual reports at the Current Research in Tennessee Archaeology (CRITA) conference organized in Nashville every year by Kevin E. Smith of Middle Tennessee State University and Mike Moore of the Tennessee Division of Archaeology. In those presentations, we have typically discussed new discoveries of prehistoric (and occasionally, historic) rock art in Tennessee, in both open-air and dark zone cave contexts. These reports have been primarily descriptive, always designed to share the rich and varied corpus of ancient art that the State contains with the archaeological community. Several years ago, Smith and Moore agreed that publishing some of these presentations as papers in Tennessee Archaeology, beginning with older ones that have not been published elsewhere, might be useful to archaeologists as basic information about these important and sometimes compelling sites (Simek et al. 2018). This paper is one from those past presentations, the CRITA report we gave in 2009 concerning newly discovered Tennessee rock art found in 2008.*

*As of early 2019, we have formally recorded 122 rock art sites in Tennessee. Of this total, 58 are dark zone cave art sites and 64 are open-air rock art localities.*

The year 2008 was very productive for the University of Tennessee Cave Archaeology Research Team and its friends. Eight new prehistoric rock art sites, two in caves and six in the open-air were visited and documented by the UT CART working with colleagues from Sewanee-The University of the South and Volunteer State Community College. New data were also obtained on several other previously known cave art sites. In this paper, we will briefly describe seven new Tennessee sites, along with a precontact pictograph site in Kentucky that is similar to many sites in Tennessee; we will also provide updates on a few other caves where new data are available.

In early 2008, we visited Kentucky at the encouragement of Randy Boedy and Mary White *(both at the time with the National Forest Service although Boedy is now retired)*, who took us to see the Long Tail Shelter in Wayne County. This site (which has a site file number that we will not use it here to protect the locality) has been known by Kentucky archaeologists

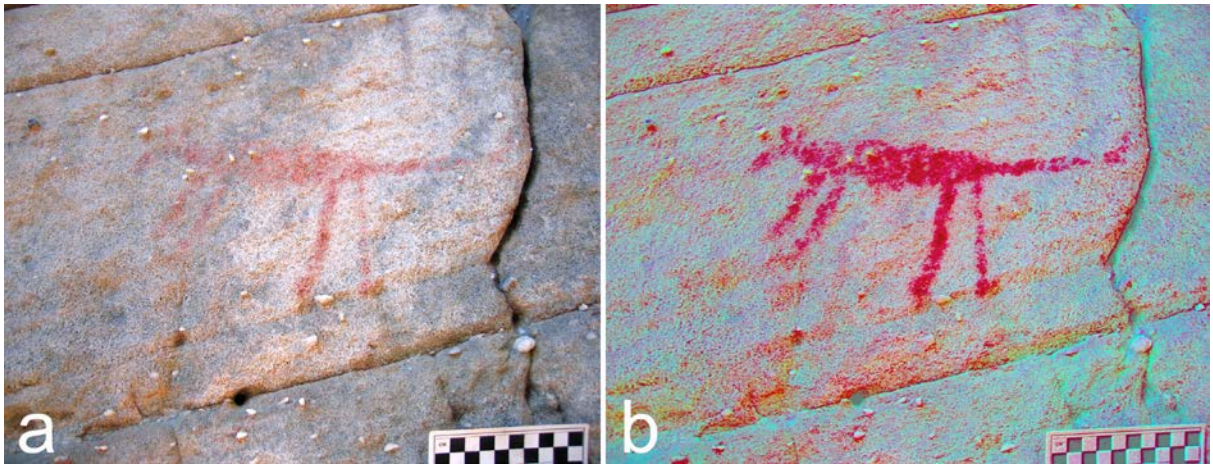


**FIGURE 1. Red painted pictograph of a quadruped with a long, horizontal tail from the Long Tail Shelter, Kentucky. a: raw digital photograph; b: same photograph enhanced using *DStretch*® LRE enhancement for red pigment.**

for a long time. Even when we visited the site, however, Long Tail was one of only one or two pictograph sites known anywhere in the Commonwealth *(we have documented several new pictograph localities in Kentucky since 2008)*. The presence at the site of a single red image painted onto an open sandstone rock exposure makes Long Tail more like rock art sites to the south in Tennessee, where one or a few red pictographs at a site is a common assemblage, than it is to the other (very rare) pictograph sites in Kentucky (Coy et al. 1997).

Long Tail Shelter is on private land almost within sight of the Tennessee border. There is a slight overhang at the cliff protecting the platform beneath and forming a large (more than 100m wide) south-facing rockshelter below the rim of the western Cumberland Plateau escarpment; the site elevation is at about 494 m (1620 ft) amsl. Long Tail Shelter has been heavily looted over the years, but there were still some artifacts evident in the looter piles during our visit: cord-marked and fabric-marked limestone tempered sherds were observed, along with lithic debitage. Boedy has seen or been told of extremely rich excavated assemblages from this dry shelter, and he cited the presence of various Archaic and Woodland projectile point types, textiles, basketry, cane matting, wooden implements, and grinding equipment. Obviously, this was a rich and functionally varied prehistoric site. Unfortunately, frequent and intensive looting has done significant damage to the deposits.

On the wall at the center of the habitation area is a single pictograph in red of a quadruped (Figure 1). The image is difficult to see today given its preservation (Figure 1a) but digital enhancement using Jon Harman's *Dstretch*® plug-in for ImageJ (Harman 2005) clarifies the form (Figure 1b). The animal faces left (west) and has an oval head and two rounded upturned ears. The torso is a narrow oval that ends at the right in a long tail held parallel to the ground plane. The four well-defined legs are thin, and all are slightly curved. The back legs are decidedly longer than the front and end in expanded elements that appear to be feet. We cannot identify the animal taxonomically with the

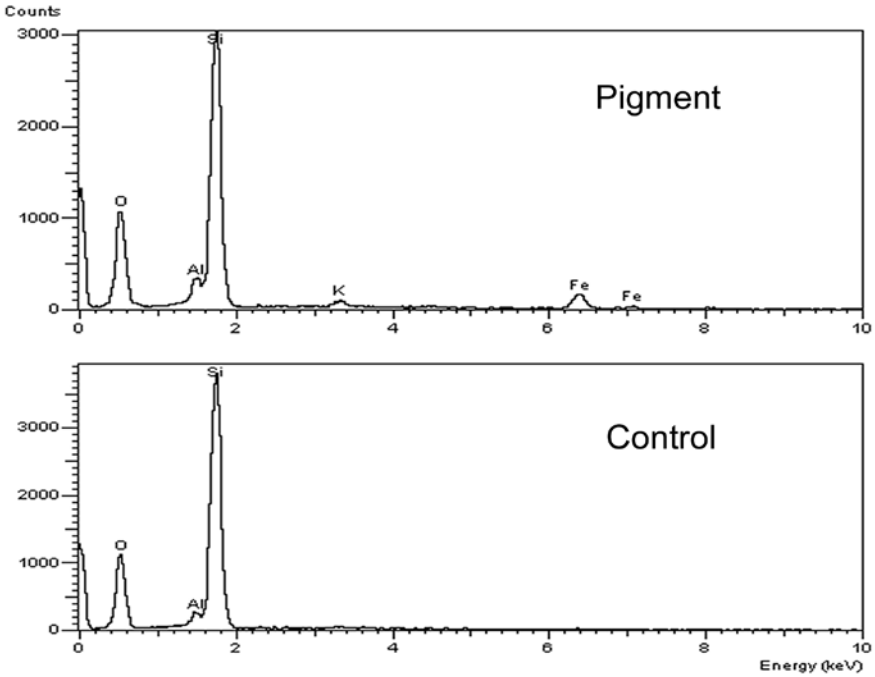


**FIGURE 2. EDS Spectra showing results of Energy Dispersive X-Ray Spectroscopy of pigment from the Long Tail Shelter, Kentucky. (top): analysis of the pigment sample, (bottom): a bare rock control sample from adjacent to the pictograph. A peak for silica (Si) present in both samples reflects sandstone bedrock elemental composition. Note the small peaks for potassium (K) and iron (Fe) present in the paint sample; these indicate the presence of ochre and probably clay.**

characteristics drawn by the makers.

Quadrupeds are, in fact relatively rare in southeastern cave and rock art, so this figure is particularly interesting. *(By 2019, quadruped figures, some taxonomically identifiable, have been identified in a number of cave and rock art contexts (Simek and Cressler 2008), so what was rare a decade ago is less so now)*. Its unique character, especially given the other rock art in the region we have seen, led us to be concerned for its authenticity, i.e., its prehistoric origin. We decided to test a few grains of this pigment to determine if the paint recipe matched what we had seen in other prehistoric pictographs. Energy Dispersive X-Ray Spectroscopy using Scanning Electron Microscopy provided analysis of the pigment used to make the Long Tail figure.[1] Control samples of the bare sandstone rock were also taken. *(We note that this was one of the few cases where we took actual pigment samples from a rock art site; today, we use portable and non-invasive spectrometers to analyze paint chemistry in situ, without sampling, but these instruments were not availabe in 2008 in the form they are today)*. EDS analysis (Figure 2) identified a red iron oxide, likely hematite, as the primary chromophore in the paint, evidenced by

**FIGURE 3. Red pictograph of an anthropomorph from Painted Bluff, Alabama showing the raised arms posture common in Cumberland Plateau rock art.**

2.84% iron in the sample. As for many of the prehistoric paint recipes we have identified, the paint contained a clay binding agent, identifiable by the presence of potassium and elevated levels of aluminum in the EDS spectrum. Both the pigment and the control sample are comprised of major components of silicon and oxygen, as the basal rock is quartz-bearing sandstone and the pigment sample certainly contained elements of the underlying rock background. There are no trace elements (like lead or arsenic) associated with historic paint products. These results indicate that the pictograph paint was most likely red ochre and clay mixed with water, a recipe seen in other pictographs that have been tested for composition (Loubser 2007). *Since the analysis described here, we have carried out numerous other studies of prehistoric pictograph paint composition and this basic recipe was the typical one used in the precontact past (Blankenship et al. 2009; Simek et al. 2012)*.

Red bluff paintings are common in the southern Cumberland Plateau area of Tennessee. The most common motif in this region is a human figure, arms and often legs outstretched with fingers and toes splayed at the ends of the limbs (Figure 3). Geometric and abstract figures are also common. Often, only one or a few such pictographs are present at a given site, much like at Long Tail. It is often the case with these pictograph sites at the Cumberland Plateau rim that a “stone door” passage through the bluff is nearby, allowing access from the plateau top to the valleys below, perhaps related to access or

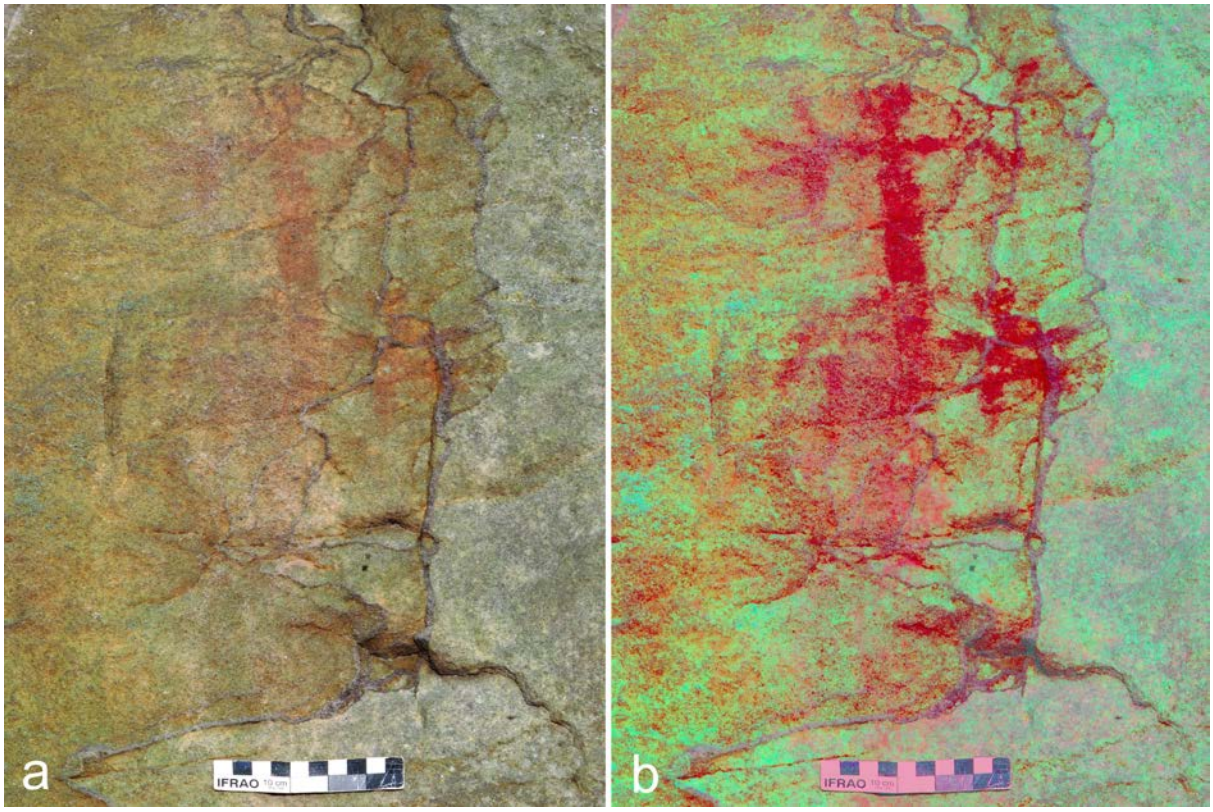


**FIGURE 4. Red pictograph from a rockshelter in southern Tennessee, showing an anthropomorphic figure with extended limbs and exaggerated hands and feet. a: raw digital photograph; b: photograph enhanced using *Dstretch*® LRE for red.**

visibility of the paintings to passersby. This is the case at Long Tail.

A new Tennessee pictograph site was discovered by Sarah Sherwood on the Cumberland Plateau escarpment in southern Tennessee. This site comprises a single red image positioned 3 m above the ground on a southeast-facing vertical wall of sandstone at an elevation of 573 m (1880 ft) amsl. The site exhibits a single solid anthropomorphic figure painted in red (Figure 4). The hands and legs are extended and the digits on both sets of appendages are exaggerated. We noted above that this is a common way that anthropomorphs are depicted in Cumberland Plateau rock art. There may be a bit of a tail or a phallus descending from between the legs. As for the Long Tail pictograph, a "stone door" passage through the bluff is nearby, allowing access from the plateau top to the valleys below.

Not far from the preceding site, at the upper edge of a deep drainage valley, are a series of new pictograph sites located along what we have called "Ruby Bluff" (not the actual name of the locality). We were taken to these sites by Jason Reynolds, a ranger in the South Cumberland State Park, who found them while rock-climbing in the area. There are three rock art localities on Ruby Bluff, which we have number 1, 2, and 3. These are scattered every 100 m or so along a long, south-facing sandstone cliff located around 520 m (1700 ft) amsl. *(A fourth locality, Ruby Bluffs 4, was discovered in the same area in 2010)*. The pictograph that caught Jason's attention is a remarkable human figure from Ruby Bluff

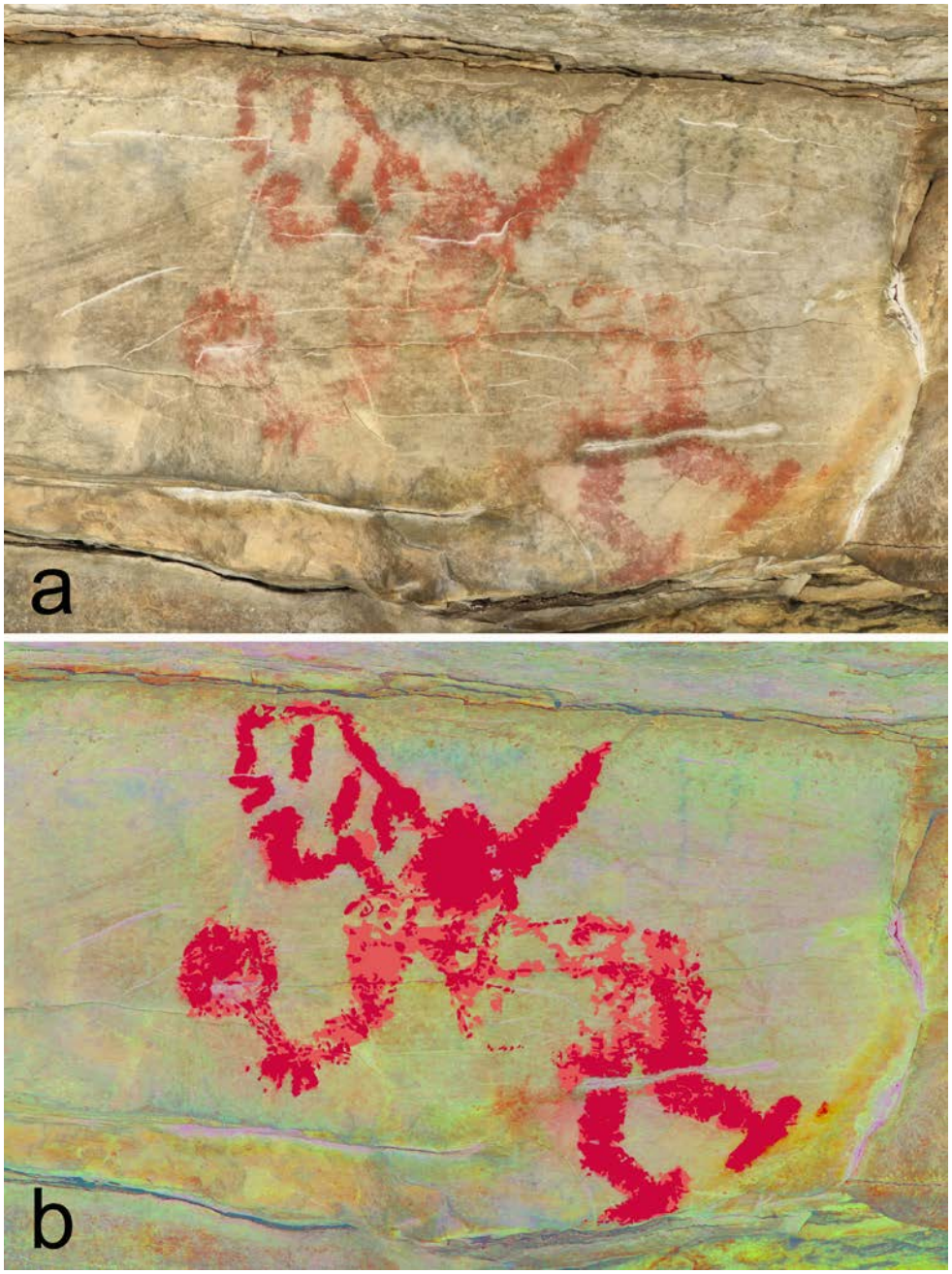


**Figure 5. Red pictograph of an anthropomorph from Ruby Bluffs 1, Tennessee. a: raw digital photograph; b: digital drawing overlaid onto photograph.**

1 shown in silhouette with elaborate regalia including a round mace or rattle in the right hand (Figure 5). Obviously, this is a different kind of image than our simple humans with extended limbs, but this elaborate outline rendering does have precedence at, for example, Painted Bluff (Figure 6) on the Tennessee River in Alabama (Simek et al. 2013; Simek et al. 2012). There are other paintings at Ruby Bluff 1, but these are either poorly preserved or non-representative abstract forms.

Ruby Bluff 2 contains at least five red

**FIGURE 6. Red outline pictograph of an anthropomorph, shown in a horizontal pose with arms extended, from Painted Bluff, Alabama.**

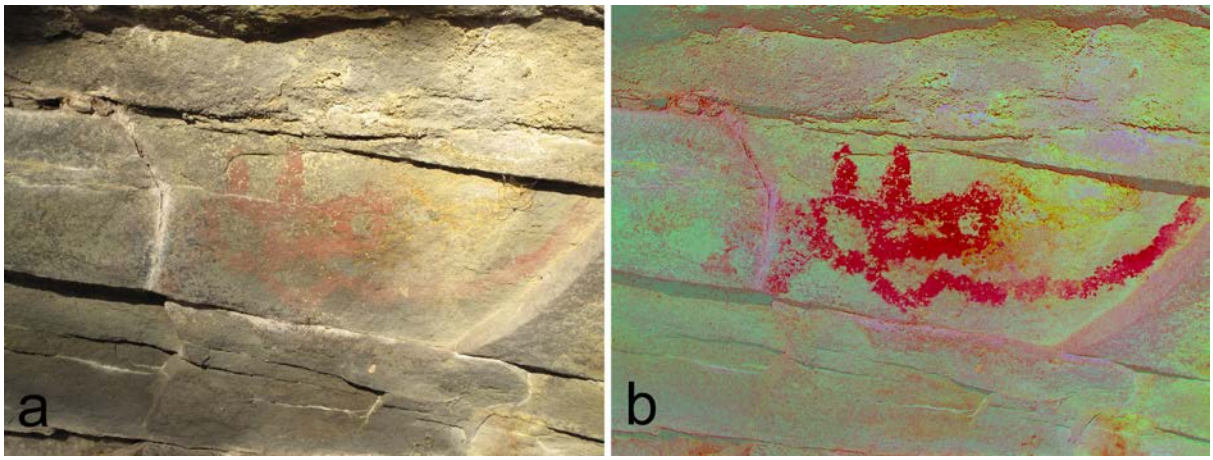


**FIGURE 7. Red pictograph of an enigmatic figure from Ruby Bluffs 2, Tennessee. a: raw digital photograph; b: photograph enhanced using *Dstretch*® LRE for red.**

pictographs, most circles or lines, but one complex figure may by a face effigy with projections or horns on the top (Figure 7). This site yielded the concave base of a triangular PPK, possibly a Madison type. At Ruby Bluff 3, we return to more familiar subject matter, with simple red anthropomorph shapes, geometric forms, and a noteworthy human effigy comprising a face with open eyes and a short body or shoulders comprised of vertical line segments below a narrow neck (Figure 8). This site also yielded a possible Madison triangular point and a single brushed limestone-tempered sherd. Thus, both context and preservation suggest a

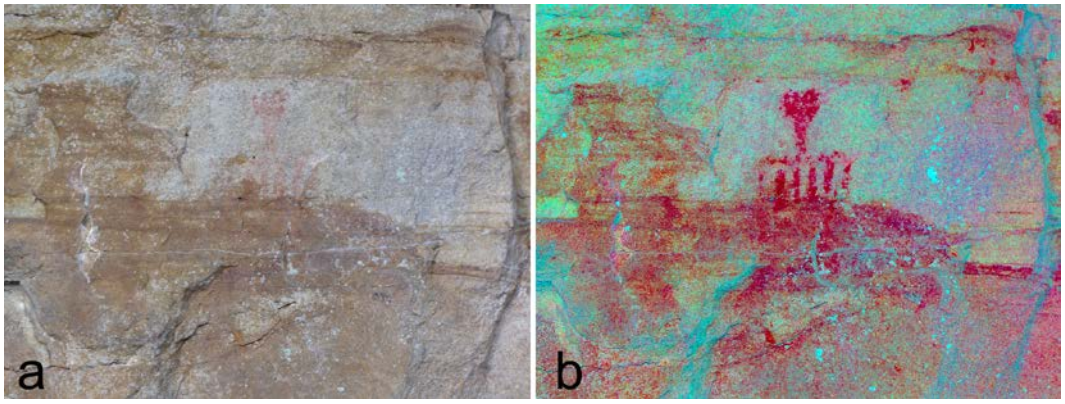


**FIGURE 8. Red pictograph of an anthropomorph from Ruby Bluffs 3, Tennessee. a: raw digital photograph; b: photograph enhanced using *Dstretch*® LRE for red.**

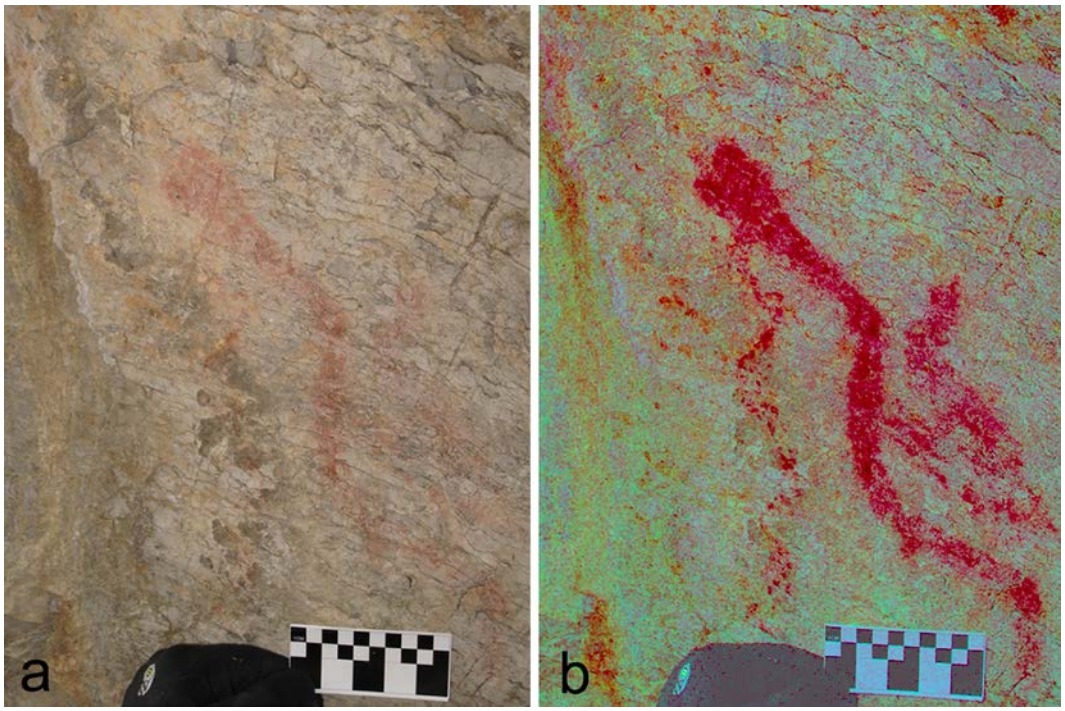


**FIGURE 9. Red curvilinear pictograph from the Tallassee Pictograph Site, Tennessee. a: raw digital photograph; b: photograph enhanced using *Dstretch*® LRE for red.**

Mississippian age for the Ruby Bluff pictographs.

Red pictographs are not exclusive to the Cumberland Plateau. In the winter of 2008, we were taken to a site on the Little Tennessee River in the Great Smoky Mountains where we saw the pictograph shown in Figure 9. Because this site is located not far from the historic Cherokee community at Tallassee Old Town, we call it the Tallassee Pictograph site, but we do not know if historic or ancestral Cherokee people made these linear designs. The Tallassee Pictographs were discovered by Erik Kreusch, then an archaeologist with the Great Smoky Mountain National Park, although this site is not within the park. The site is at the edge of a major river valley that passes through the Smoky Mountains at a relatively low elevation (292 m or 960 ft amsl). This location sets the Tallassee Pictograph apart from most of the rock art

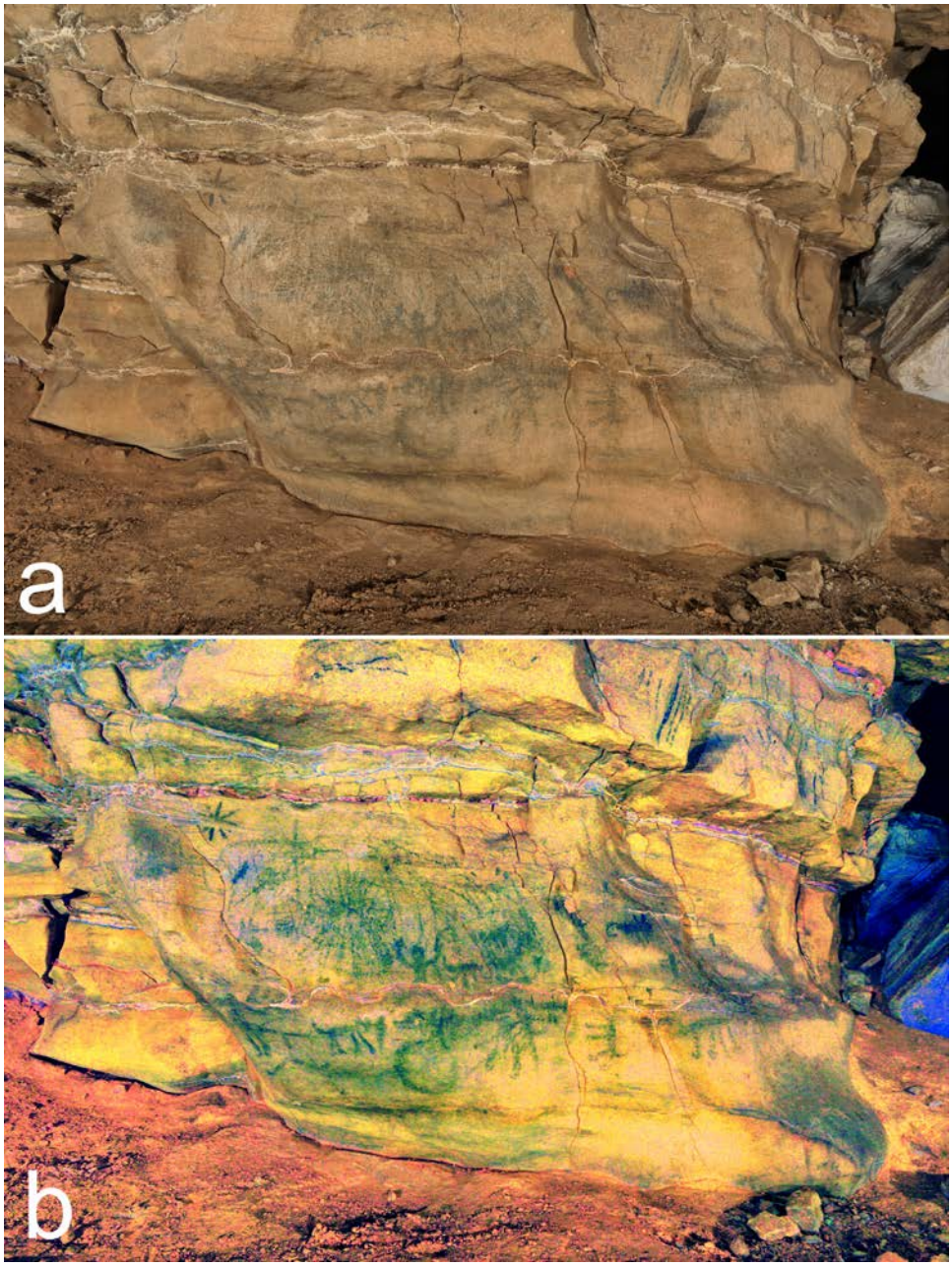


**FIGURE 10. Cave art panel from 61st Unnamed Cave, Tennessee. a: unmodified photograph showing black pictographs of an anthropomorph with arms raised and numerous quadrupeds; b: photograph enhanced using *Dstretch*® YBK for black.**

in Tennessee. The figure is composed of solid curving lines, one long, sweeping and recurving from the top left to the bottom right of the figure and other smaller or thinner lines adjacent to the larger curve. We do not hazard a guess as to what the figure was designed to show.

A new dark zone art cave was discovered in July, 2008, by Joe Douglas, Kristen Bobo, Sherri Person, and Gerald and Avis Moni. The cave, which we labelled “61st Unnamed Cave,” is situated on the eastern Highland Rim, with a steep inclined, rocky entry opening to the SE.

Once the talus slope is negotiated, the cave opens into a large entrance room, 50 m long, 20 m wide, and 13 m high. This large room has been extensively looted for some time. Although the cave extends as a lengthy stream passage, prehistoric use was primarily concentrated in the large, dry entrance room.

There are three main areas or panels of cave art in 61st Unnamed Cave, all along an upper ledge on the eastern side of the entry chamber. These panels contain three types of cave art and may represent more than one creative episode. The first panel is located low on a wall at the base of the entrance slope; it is the richest and most complex of the rock art areas at the site (Figure 10). Numerous pictographs painted in black were made on the bare rock face of this panel. An anthropomorphic figure with raised arms is at the center. There are also at least seven quadrupeds (Figure 11); the open mouths, position of the tails, and general shape suggest that they may be canids. Previously rare in southeastern cave art, these dogs bear a remarkable similarity to those from 60th Unnamed Cave (Simek and Cressler 2008) many kilometers south. Incised petroglyphs overlay the pictographs on Panel 1 (Figure 12) consisting of both curvilinear and straight lines. Some lines are parallel while others show crosshatching. None of these petroglyphs are immediately recognizable as representational. There is no instance of paint overlying an engraved line on this panel.

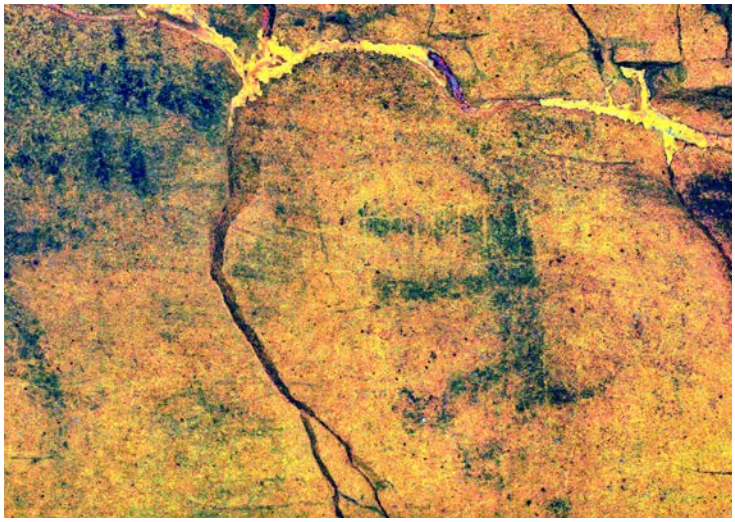

**FIGURE 11. Quadruped pictograph from 61st Unnamed Cave enhanced using *Dstretch*® YBK for black.**

**FIGURE 12. Unenhanced photograph of panel shown in Figure 10. Note engravings over the top of the pictographs, including chevrons, crosshatching, and areas of repeated parallel lines.**

The second panel is located a few meters deeper into the cave and is quite different in form, placement, and media. This art is on the ceiling and consists of

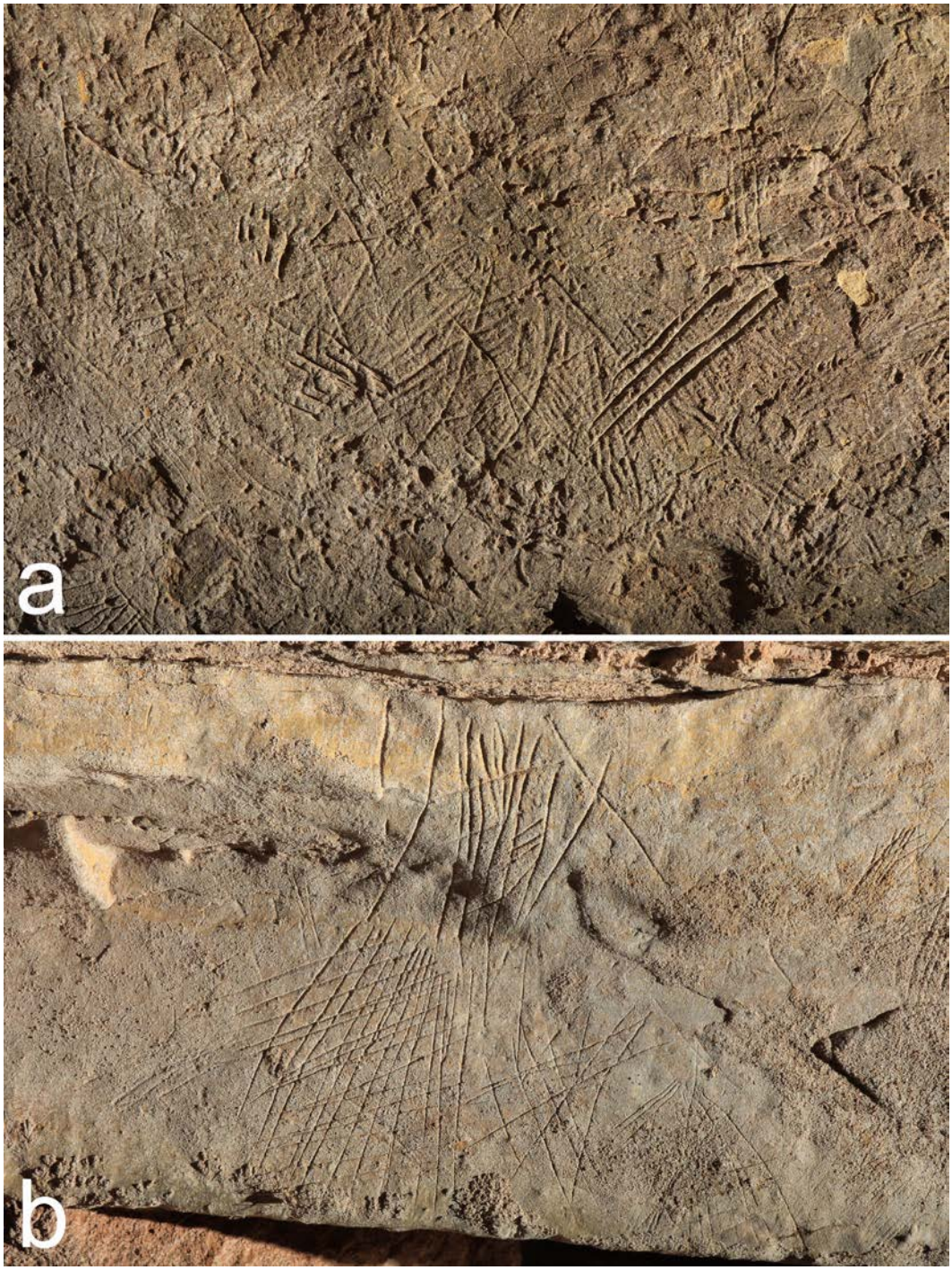


**FIGURE 13. Mud glyphs (a) and petroglyphs (b) from separate areas of 61st Unnamed Cave, Tennessee.**

deep, wide lines cut into a veneer of mud (Figure 13a). These mud glyphs include geometric shapes and parallel lines but no clearly identifiable images. The third panel is near the far end of the entrance room on an upper wall and consists exclusively of finely inscribed petroglyphs including geometric designs (Figure 13b). Our initial impression of the finely scratched petroglyphs in the cave is that they are like

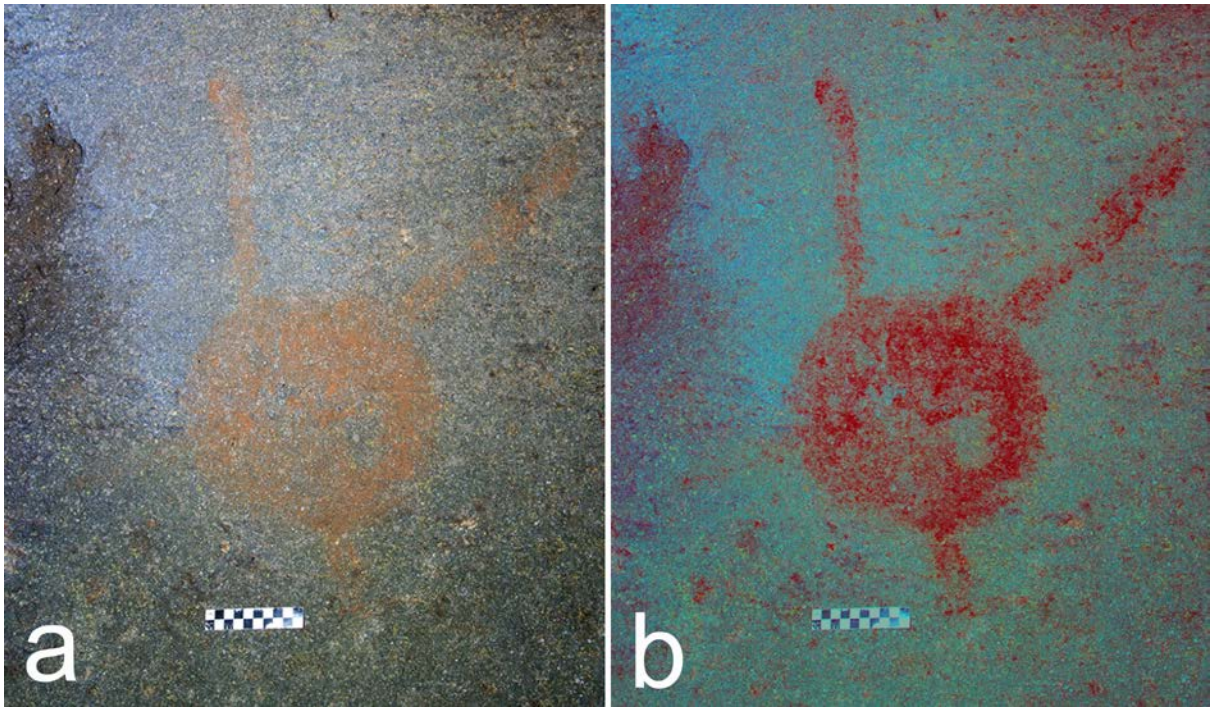


**FIGURE 14. Red pictograph from 50th Unnamed Cave, Tennessee. a: raw digital photograph; b: photograph enhanced using *Dstretch*® LRE for red.**

some of the finely made incised art in 12th Unnamed Cave (Simek and Cressler 2015), only a few kilometers away, and they may have been made by the same people. There is a great deal of work to do at 61st Unnamed Cave in the future, including documenting the relationships between engraved and painted images on the first panel and comparing the mud glyphs, petroglyphs and pictographs to other sites in the region with similar techniques and motifs. *Note that the images provided in Figures 10-13 were taken in 2018 with new high-resolution equipment.*

We carried out ongoing research in 2008 in several previously-known cave art sites that warrant brief discussion. Several new radiocarbon dates on rivercane torch fragments recovered at 50th Unnamed Cave, discovered last year, has provided some chronological context for a red face pictograph (Figure 14) found at the mouth of the cave and several "toothy mouths" found in the cave's dark zone (Simek et al. 2004). Three AMS dates were obtained by Joseph Douglas. The first has a measured age of 570 ± 40 BP and calibrates at 95%CI to AD 1299-AD 1370 BP and AD 1380-AD 1428 BP using OXCAL with INTCAL13 (Bronk Ramsey 1995). The second sample has a measured age of 620 ± 40 BP and calibrates at 95%CI to AD 1288-AD 1405 BP. The third has a measured age of 630 ± 40 BP, which calibrates at 95%CI to AD 1285-AD 1401 BP. We note that the charcoal samples used for these dates were recovered in several passages of the cave, but they indicate visitation during the 14th century, i.e., the Mississippian period, in every case. This is in line with what we know about similar red pictograph art at other Tennessee sites.

We conclude with what can only be described as a disastrous collision between well-intentioned and conservation-minded cave cleaning and

**FIGURE 15. Spray paint graffiti in 60th Unnamed Cave, Tennessee.**

prehistoric cave art in what may have been one of the richest and most impressive cave art sites in the entire Southeast (Simek and Cressler 2008). According to the owners of 60th Unnamed Cave, located in southeastern Tennessee, they were approached in 2005 by a local caving group about the possibility of cleaning their cave. This offer was not unwarranted, as the cave had seen repeated and base defacement, some viciously racist and fascistic, by clandestine visitors for many years. In many areas of the cave's deep passages, graffiti and signatures, most executed in spray paint and what was assumed to be black paint or smoke, covered the labyrinthine and beautifully sculpted corridors (Figure 15). With the owners' permission and gratitude, 60th Unnamed Cave was cleaned. When we first visited 60th Unnamed Cave in 2008, we could see that the cleaning had been very effective, involving the use of wire brushes and a considerable amount of liquid applied to certain panels of the cave wall (Figure 16). As far as we can determine, cleaning activities were carried out over more than 100 meters of major passage in the cave.

In early 2008, Alan Cressler revisited 60th Unnamed Cave and through the brush marks and stains, he saw a number of impressive charcoal drawings of subjects and in a style he knew to be typical of late prehistoric artwork. He also saw quantities of river cane torch charcoal scattered across the cave floor and concentrated on ledges in many parts of

**FIGURE 16. Panel of cave wall showing scrubbing and smearing of black coloring in 60th Unnamed Cave, Tennessee.**

**FIGURE 17. Black charcoal pictograph of a rayed cross-in-circle motif from 60th Unnamed Cave, Tennessee. This pictograph was not damaged by cleaning.**

the cave. In July of 2008, Cressler returned to the site with Jan Simek, Marion O. Smith, Manual Beers, and two owners of the cave in order to verify what he had seen. It quickly became obvious that beneath the modern spray-painted names and symbols were numerous black charcoal pictographs. Many had been obliterated or severely damaged by the cleaning activity. Still, as of the end of 2008, we have been able to locate and document more than 30 pictographs in the cave, many substantially altered by the cleaning activity. Surprisingly, many pictographs can still be recognized and identified as to their motif. There surely were many more at one time. Many of these illustrate known prehistoric iconography (Figure 17).

Two separate areas inside 60th Unnamed Cave have most of the pictographs on their walls. The more remote of these areas contains more than a dozen pictographs in two small chambers, including several circular motifs that are “filled” with crosses, ovals, or lines in ways that are typical of late prehistoric cave art in this region (Figure 18a). At least two anthropomorphs are also present in this area, one a phallic stick figure with arms and legs raised upward (Figure 18b). This part of the cave was not cleaned, and so we are confident of the form and number of glyphs in these chambers.

The remaining cave art images in 60th Unnamed Cave are in larger and more open trunk passages that constitute the main parts of the cave. In this area, pictographs are numerous and, up until now, associated with only one wall of the main passage. The dominant image subject in this area is a four-legged animal effigy (Figure 19a). In most examples, this quadruped has a long muzzle, short but distinct and erect ears on the top of the head, a long narrow body, and a notable tail that is shown curving over the back of the animal. In at least one of these effigies, long, fierce-looking teeth are shown, and several have three toes or claws on their feet. One animal has a down-turned tail. Six of these animals are shown in a single panel (Figure 19b), clearly forming a group, and this “pack” moves around a rock outcrop from right to left where they confront another quadruped (Figure 20) with semi-circular talons for feet, a long snout with sharp teeth, and a long tail that

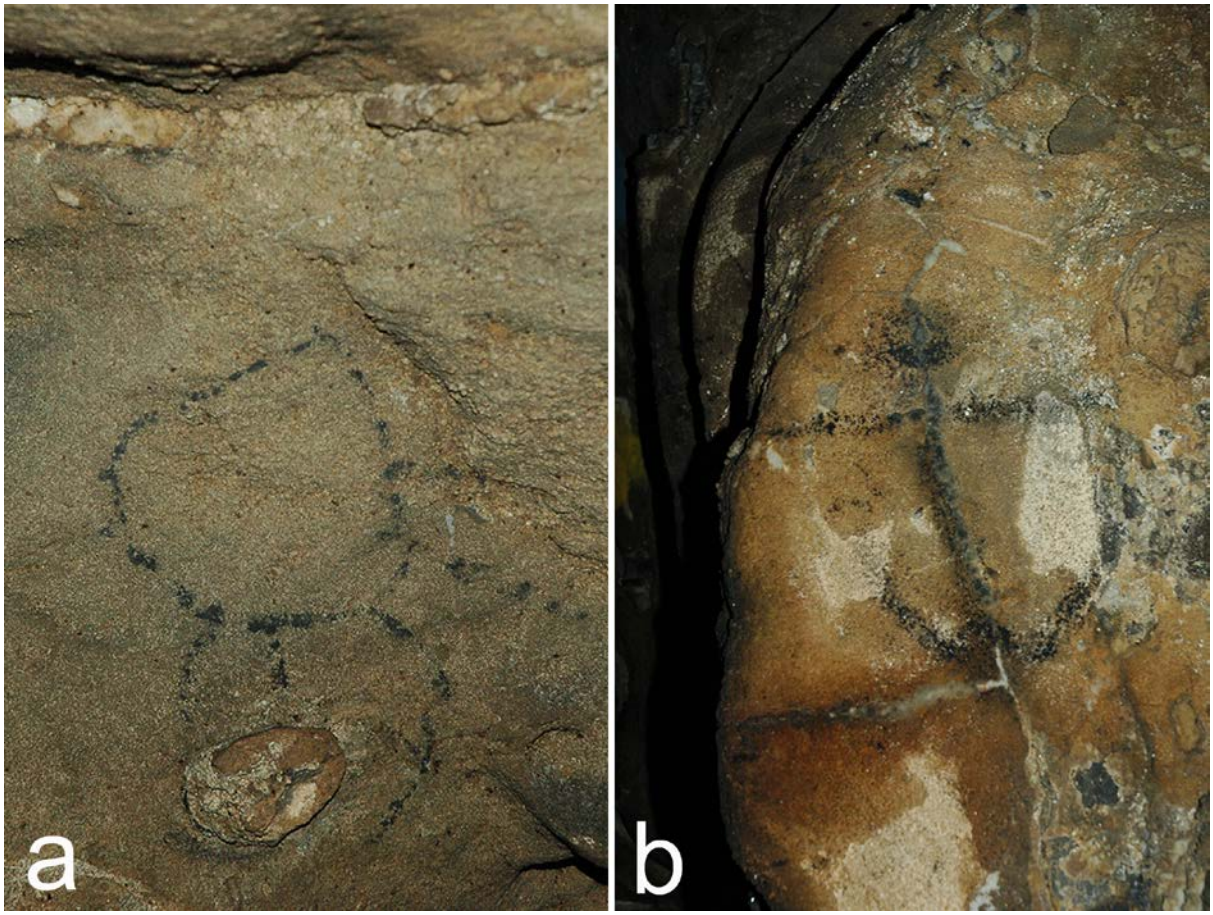


**FIGURE 18. Black charcoal pictographs from a remote area of 60th Unnamed Cave, Tennessee. a: circle motif; b: anthropomorph motif.**

curves twice over its back. This last animal does not resemble any living creature. Because of body shape, head configuration and the up-curving tails, we believe that the pack animals are canids, either wolves or dogs. These effigies match in many ways, both physically and in their behavior, the descriptions of domesticated dogs provided by many early European visitors to Native American encampments (Schwartz 1997). In any case, the canid pictures in 60th Unnamed Cave are similar to those from 61st Unnamed Cave discussed above. Thus, these suggest a motif that is more common in caves than previously recognized. There are also human images in this part of 60th Unnamed Cave. As for those in the more remote, uncleaned area, these are all simple silhouette figure drawings with little feature detail (Figure 21), and all have been cleaned to greater or lesser degree. All have both arms raised into the air, and one is phallic. And while dogs are rare in southeastern cave art, human figures like these are common, as we have seen; their presence here supports the interpretation of the 60th Unnamed Cave as a prehistoric art site.

Many glyphs in the main passage of 60th Unnamed Cave are more abstract symbols, like maces, weapons of chiefly power known from numerous Mississippian contexts, possible plants, and geometric forms. These, with the human and quadruped effigies, all point to a late prehistoric age for the assemblage and highlight the deep religious and

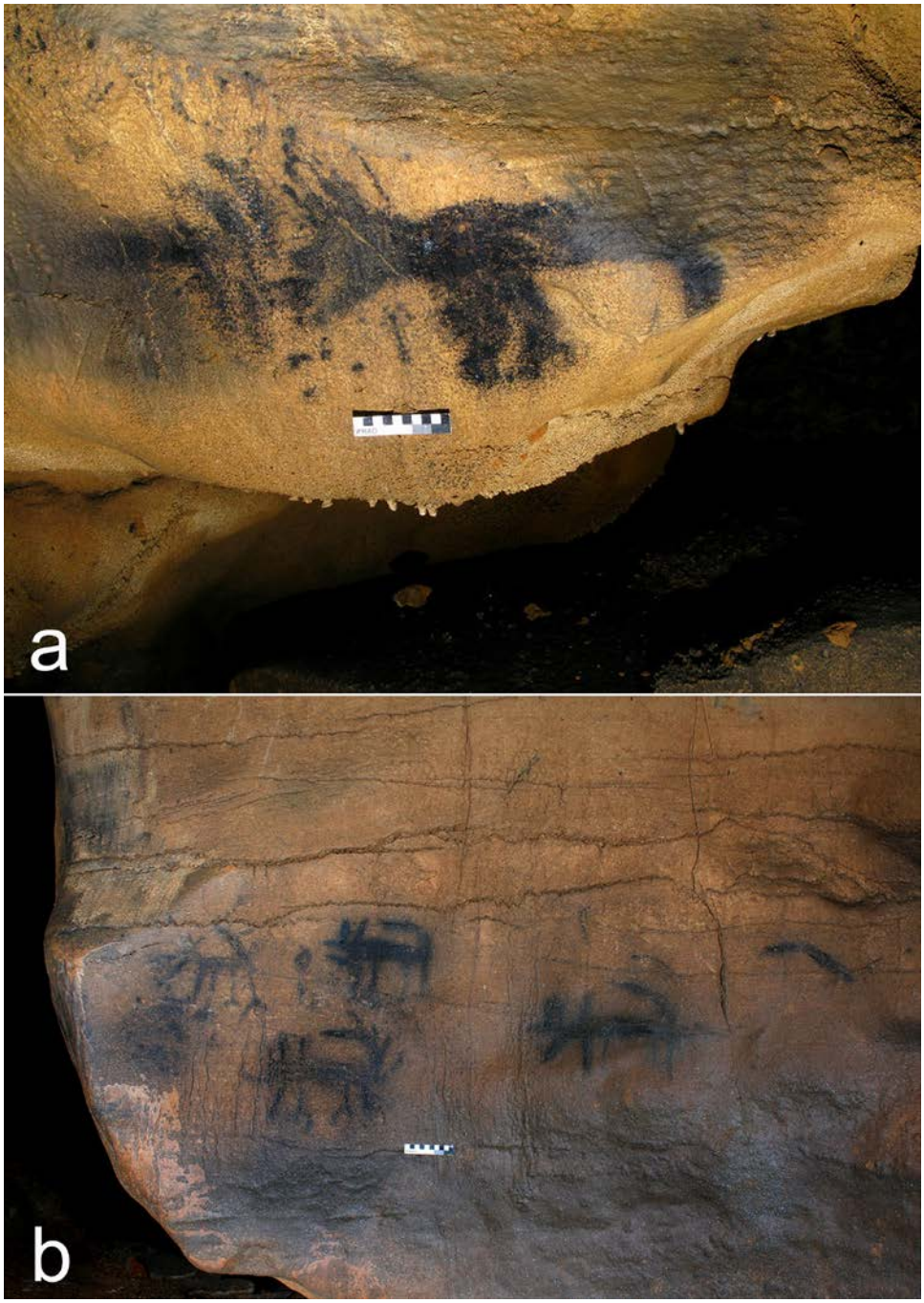


**FIGURE 19. Black charcoal pictographs of canids from the main passages of 60th Unnamed Cave. a: individual dog damaged by cleaning; b: group of six dogs in a single panel. Note perked ears, long snout, and upward curving tail on all images. This panel was not damaged by cleaning.**

scientific significance of this cave art site. It is hard to tell what might have been in 60th Unnamed Cave prior to cleaning, but we are certain that the pictograph assemblage was much larger than what we have been able to document there. This cave should be a lesson to us all: caves in the Southeast should not be cleaned unless

**FIGURE 20. Black charcoal pictograph of an unknown quadruped with talons for feet, sharp fangs, and a tail that curves several times over the animal's back.**

**FIGURE 21. Black charcoal pictograph of an anthropomorph (top) and a reclining quadruped (below). Both show damage from cleaning.**

and until a trained archaeologist has certified that ancient artifacts or artwork were never present in the site (Simek and Cressler 2008). Even with the damage, however, 60th Unnamed Cave is a remarkable if compromised addition to the corpus of America's only true prehistoric dark zone cave art tradition.

Thus, 2008 was a productive year for the discovery of Tennessee prehistoric rock art. It is clear now that red pictograph sites are probably quite numerous in our area, especially in the central and southeastern part of the state, and we think we may soon be able to predict their locations. It is also clear that there are still major cave art sites to be found and documented. And our understanding of all these sites will only be advanced by examination of their landscape dimensions.

*Notes*:

[1] SEM/EDS was carried out on a small scrape sample of the Long Tail pigment by Sarah Blankenship; SEM facilities in the Center for Materials Processing at the University of Tennessee, Knoxville were used for this analysis.

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