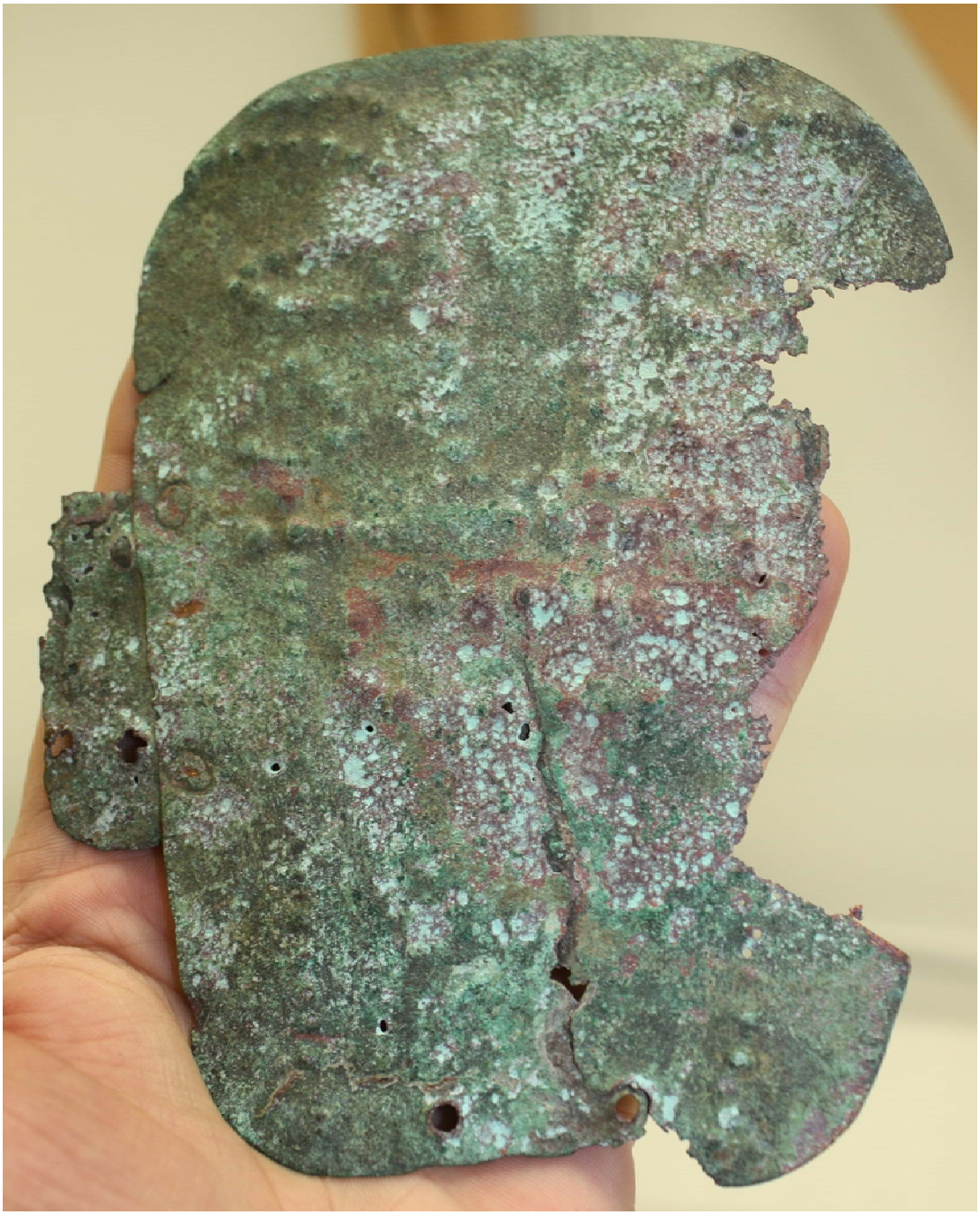
TENNESSEE ARCHAEOLOGY

Volume 10 Fall 2020 Number 2



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TENNESSEE ARCHAEOLOGY

VOLUME 10 Fall 2020 NUMBER 2

EDITORS CORNER

Kevin E. Smith, Michael C. Moore, and Phillip Hodge

We are pleased to present the final issue of the first ten volumes of *Tennessee Archaeology*. With dissolution of the Tennessee Anthropological Association and its journal *Tennessee Anthropologist* in 2000 (following on the heels of the last issue of *Tennessee Archaeologist* in 1981), several senior Tennessee archaeologists, notably the late Charles McNutt, raised concerns over the lack of a publication outlet for "state level" archaeology articles – meaning articles that were primarily reporting "data" on Tennessee archaeological sites. In response, Smith and Moore held a series of discussions at the Annual Meeting on Current Research in Tennessee Archaeology in 2003 and 2004, eventually proposing what was then a fairly novel idea – a peer-reviewed journal distributed free-of-charge in electronic format by the Tennessee Division of Archaeology (TDOA) and Middle Tennessee State University (MTSU). From the beginning, the goal was to publish two issues per volume – each volume targeted at approximately 200 pages. While in an ideal world, a volume would be issued every calendar year, the editors acknowledged from the outset that the timing of publication would be dependent largely on the number of submissions – a chronic problem for many similar state-level archaeological journals. While numerous concerns were expressed at the time about the purely electronic nature of publication, one enticement has always been our ability to include significantly larger quantities of figures – in full color – than most print journals allowed. In August 2004, the first issue of *Tennessee Archaeology* – edited by Moore and Smith – was e-published. At that time, the TDOA did not have access to web server space, so Smith hosted the journal at MTSU. Some sixteen years later, the milestone of ten completed volumes is finally at hand.

FIGURE 1. Editors Mike Moore and Kevin E. Smith at the Annual Meeting on Current Research in Tennessee Archaeology, 18 Jan 2020 (*Giovanna Vidoli).*

While Moore retired as State Archaeologist and Director of the Tennessee Division of Archaeology in February 2020 (Figure 1), he has stayed on as interim co-

editor for this issue to assist in transitioning the journal co-editorship to Phillip Hodge, the newly appointed State Archaeologist. With this issue, we also announce the reorganization of the journal with a newly appointed Editorial Advisory Committee consisting of nine members from across the state and including diverse specializations and interests (serving staggered three-year terms). We express our appreciation to these individuals for agreeing to serve – and to help promote the submission of future articles.[1]

As we close out Volume 10, *Tennessee Archaeology* has produced 1829 pages, 1255 figures, and 243 tables (Figure 2). While the text is, of course, important – we are particularly pleased that we have been able to present so many images using this format. A perfect example is the series of research reports produced by Jan Simek and colleagues of the University of Tennessee Cave Archaeology Research Team – vividly documenting in images their discoveries year by year.

We also think the number of tables is equally impressive – many of them containing the extensive raw data often available only in hard-to-find "gray literature" reports and difficult to publish *en masse* in other kinds of journals. That was and remains a primary future goal of *Tennessee Archaeology*. We created an "open access" journal quite a few years before that became the catchphrase of web publishing, and we intend to continue that long tradition in the next ten volumes. As always, we appreciate the contributions by authors and the assistance of reviewers in ensuring that our content is solidly peer-reviewed at a level consistent with a state journal. To continue moving forward, we encourage authors to consider submitting an article or research report to the journal.

One item that we added to the second issue of the journal was this "Editors Corner." As Smith and Moore (2005) noted: "we have added the 'Editors Corner' section as a formal venue for communicating about the journal. Because we are an 'electronic publication,' we have no official mailing list and including such a section in this and future issues of the journal seems a necessary formality… Amongst other things, the 'Editors Corner' also provides a place to include corrections to errors in previous issues…. And to highlight special happenings in Tennessee Archaeology that may not merit an 'article' or 'research report' – but do deserve mention in a 'published place.'"

In Volume 3, Issue 1, we also began including recognition of Tennessee archaeological colleagues who recently died – certainly known and recognized by their closer friends and associates, but sometimes not recognized by the broader archaeological community (particularly those important archaeologists working their careers outside academia or most of their later careers outside Tennessee). Unfortunately, that task remains one for this issue as well, with mentions of five individuals. We extend our condolences to their families, friends, and colleagues.

Dennis J. Stanford (1943-2019). While not a "Tennessee Archaeologist" in the sense that we usually use in the Editor's Corner, we felt it important to recognize the death of Dennis Stanford on 24 Apr 2019 (1943-2019). His broader contributions and details of his broader Smithsonian career are available in many national publications, so here we focus on his important connections and contributions to Paleoindian studies in Tennessee.

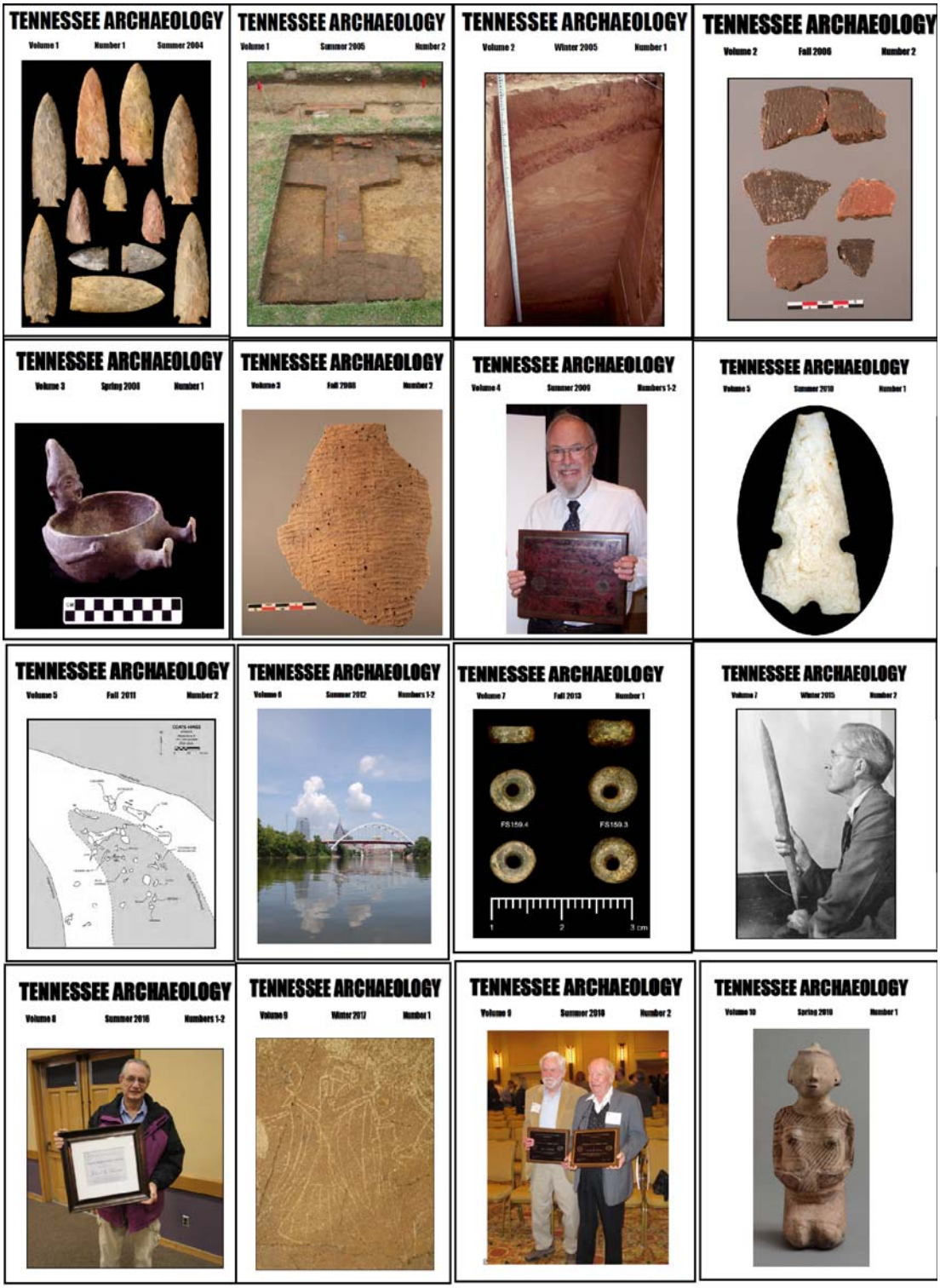

FIGURE 2. Covers of the first 19 issues of *Tennessee Archaeology* (including three "double issues" on special topics).

Stanford's connection to Tennessee began with John Broster, a fellow graduate student from Tennessee at the University of New Mexico. By 1972, Stanford had completed his PhD and was hired by the Smithsonian Institution as Curator of North American Archaeology and Director of the Paleoindian Program at the National Museum of Natural History. By 1973, Broster had finished all coursework towards his PhD and joined Dennis on the Smithsonian-sponsored excavation of the Jones-Miller site in northeastern Colorado (Moore et al. 2016). As described by Joseph Gingerich (2019):

> *This huge undertaking, funded by the National Geographic Society, involved the excavation of a 200-m^2 area of a Hell Gap (ca. 11,000 cal yr BP) bison kill site, in which over 300 butchered bison were recovered. While the size of the excavation was remarkable compared to many Paleoindian sites, it remains one of the most meticulous excavations ever conducted. Not common for the time, Dennis' excavations included three-dimensional mapping, detailed site-level aerial photography of each unit… and fine-mesh water screening and flotation of the matrix. It also included careful mapping and collection of microfauna, gastropods, pollen, and phytoliths, which allowed for detailed environmental reconstruction.*

The lifelong friendship that began in New Mexico would lead Dennis to work with John on several Tennessee Paleoindian sites decades later, including the Carson-Conn-Short Site in Benton County (Figure

FIGURE 3. Carson-Conn-Short Site. Left-right: Larry Banks, Dennis Stanford, John Broster, Shannon Hafner, and Kit Carson (*Courtesy, Tennessee Division of Archaeology*).

3; Broster et al. 1994, 1996; Nami et al. 1996; Stanford et al. 2006). The Smithsonian Institution has made the Paleoindian collection, which Dennis built, a named collection: "The Dennis Stanford National Paleoindian Collection" – which includes several type specimens donated by the Tennessee Division of Archaeology.

Jane Simpson Hinshaw (1936-2019) died peacefully at her home on 11 Jul 2019. Born in Texarkana in 1936, she married Elton Hinshaw after graduating from Baylor University and they settled in Nashville in the 1950s. After raising three children, she completed a Master of Arts in Anthropology at Vanderbilt University titled *Sevier Park: Eighteenth Century Trading Post or Nineteenth Century Settlement?* (1976). In Tennessee, she worked in historical archaeology through the 1980s, conducting cultural resource management surveys of numerous subdivisions, wastewater treatment plants, and industrial parks, along with the Cross Creeks and Tennessee National Wildlife Refuges. She also conducted larger scale excavations in Middle Tennessee at Sevier Park, Belle Meade, Rattle and Snap, the Hermitage (Figures 4 and 5), Travellers Rest, Two Rivers, and the Ryman House. In East Tennessee, she also worked at the Netherland Inn Complex. Her interests led her to travel to over fifty countries and influenced her later award-winning work as Cookbook Editor for Famous Recipes Press. Preceded in death by her husband of 60 years, she is survived by three children and five grandchildren (some facts courtesy of the *Tennessean*, 18 Jul 2019).

FIGURE 4. Jane Hinshaw (at screen) and Tom McCulloch excavating a trench for replacement of a sill log at The Hermitage (May 1980; *Michael C. Moore*).

FIGURE 5. Waterline monitoring at The Hermitage, 1981. Jane Hinshaw (bending down) in front of then Hermitage Resident Director, John J. Cooney Jr. (*Samuel D. Smith*). Inset, 2019 photo.

Robert Connolly (1952-2019) died 20 Aug 2019 at his home because of complications from cancer. Born 26 Mar 1952 in Cincinnati, Ohio, he worked as an industrial machinist for various companies before completing his B.A. in Anthropology in 1989 at the University of Cincinnati. He continued to complete his M.A. in Anthropology there in 1991 on *Prehistoric site structure at the Fort Ancient State Memorial: new evidence from Lithic Analysis.* He then successfully pursued a PhD in Anthropology at the University of Illinois Urbana-Champaign in 1996 (*Middle Woodland Hilltop*

FIGURE 6. Robert Connelly talking to visitors at Chucalissa (*Courtesy, C.H. Nash Museum at Chucalissa*).

Enclosures: The Built Environment, Construction and Function.

Robert began his academic career teaching at the University of Cincinnati and the University of Illinois at Urbana-Champaign. He did field work as an archaeologist for the State of Mississippi and later became the Station Archaeologist for Poverty Point Historical Site in Northeast Louisiana. There he worked to facilitate its designation as a World Heritage Site. Robert came to Tennessee as an Associate Professor of the Department of Anthropology and Department of Earth Sciences at the University of Memphis and Director of the C.H. Nash Museum at Chucalissa (2007-2019; Figure 6). Under his guidance, the old research lab was converted into a hands-on teaching lab for the public, and new exhibits on contemporary Choctaw and Chickasaw were added. Deeply committed to public engagement and community "co-creation," he spent numerous years developing another exhibit on African-American heritage working in partnership with the surrounding Westwood community, which is 95% African American. That passion also led to his leadership of the Public Education Committee of the Society for American Archaeology. He is survived by his wife, Emma French Connolly of New Orleans, three stepchildren, and grandchildren (some facts courtesy, the *Times Picayune* 21 Aug 2019, and Chucalissa).

Mack Prichard (1939-2020), Tennessee's first modern State Archaeologist, died peacefully on 28 Apr 2020 at the age of 81. A memorial article by Kevin E. Smith recounting Mack's archaeological career and contributions is included in this issue.

As this issue was going to press, we learned of the death of **Thomas "Tom" Des Jean (1948-2020),** archaeologist for 28 years with the National Park Service at Big South Fork National River and Recreation Area. Born outside Indianapolis, Indiana, Tom enlisted in the U.S. Navy and served four years in the Air

Wing during the Vietnam War after graduating high school. He then earned a bachelors degree in Anthropology (with a minor in Ecology) at the University of Florida in 1975. As an undergraduate, Tom participated in several archaeological field schools at a diversity of prehistoric and historic sites (under the direction of Jerald T. Milanich and Charles Fairbanks).

After receiving his bachelor's degree, Tom spent several years working as a contract archaeologist in Georgia and Florida before returning to the University of Florida to pursue a master's degree in anthropology. His thesis research (Des Jean 1986) focused on 16th-century ceramic vessels from twelve structures at the Little Egypt site in Georgia – believed by many to be the principal town of the Coosa chiefdom visited by the Hernando De Soto expedition. The same year he completed his degree, Tom was hired as an archaeological technician with the National Park Service at Big South Fork (BISO).

In a region rife with the looting of archaeological sites – particularly rockshelters – Tom created a monitoring program using remote sensing devices for several sites that quickly bore fruit. In 1987, four individuals caught looting a site and charged with a felony violation of the Archaeological Resources Project Act (ARPA) – the case received national attention as the first felony threshold prosecution under the act.

Over his 28 years at BISO, Tom tirelessly pursued recording and monitoring archaeological sites – including partnership with universities to assist in surveying the hundreds of miles of clifflines for rockshelters and assessing their threat from looting. One of those university partnerships (1996-2014) with Middle Tennessee State University

FIGURE 7. Tom Des Jean, 2003 (*Courtesy, MTSU BISO Internship Archives*).

provided dozens of archaeology students with paid summer internships and valuable field experience – and resulted in the recording of hundreds of rockshelter sites, revisiting known sites and conducting assessments, and incidentally recording populations of threatened and endangered plants and animals (Figure 7). Ultimately, Tom's dedication resulted in the recording of over 1300 archaeological sites at BISO – reportedly the largest number recorded for any national park in the Southeast. The remote monitoring program established and maintained by Des Jean also resulted in three additional ARPA cases. After his third looting case in 2004, Tom received the "Outstanding Service in Archaeological Resource Protection" award from the National Park Service. In addition to supervising students in field survey projects, Tom also taught archaeology classes at Roane State Community College and advanced placement high school classes.

Tom retired from BISO in 2014. He is survived by his wife Vicki and children Nina Benton and Matthew Des Jean. Interment was at the East Tennessee Veterans Cemetery (some facts courtesy of the *Independent Herald*, 4 Nov 2020).

Notes

[1] As some readers may recall, when the Tennessee Council for Professional Archaeology (TCPA) started charging membership fees, concerns were raised about "what do I get for my membership?" Moore and Smith agreed to use the TCPA Board of Directors as the "Editorial Advisory Board" for the journal to help promote that organization (and, quite frankly, since the editors were trying to get the first journal out within a few months in 2004, it was simply more expeditious to adopt that approach).

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ANTIQUARIAN INVESTIGATIONS AND ARCHAEOLOGICAL TESTING AT THE GLASS MOUNDS SITE (40WM3), WILLIAMSON COUNTY, TENNESSEE

Aaron Deter-Wolf and Kevin E. Smith

The Glass Mounds site (40WM3) in Williamson County is the only known Woodland period multi-mound center in the Cumberland River drainage of Tennessee. Historic land use practices during the twentieth century destroyed the majority of the site, and today Glass Mounds survives only as two conical earthworks. Although the site has been the subject of several antiquarian and modern archaeological investigations, those efforts have not been synthesized in any widely accessible format to date. Herein we describe the history of the Glass Mounds site and the results of recent archaeological testing, including an assessment of mound integrity and the recovery of new radiocarbon data.

The Glass Mounds site (40WM3) in Williamson County is the only known Woodland period multi-mound center in the Cumberland River watershed of Tennessee. During the late nineteenth century CE the site's four earthen mounds were prominent fixtures on the landscape of the Harpeth River Valley and attracted attention from antiquarian archaeologists, including Tennessee field agents of the Smithsonian Institution and Harvard's Peabody Museum. Excavations by Joseph Jones, William Clark, and Edwin Curtiss focused on the mounds, and recovered artifacts diagnostic of the Middle Woodland period of regional prehistory (ca. 1-500 CE). Among these materials were copper masks, "panpipes," and earspools, demonstrating that residents of the Glass Mounds participated in the Hopewell Interaction Sphere, a pan-regional exchange network of exotic goods centered on Hopewell cultures of the Ohio Valley (e.g. Caldwell 1964; Carr and Case 2005; Ruhle 2005; Turff and Carr 2005).

The combined impacts of antiquarian investigation, historic phosphate mining, and late twentieth century development ultimately destroyed the majority of the Glass Mounds site. Today two remaining conical earthworks are incorporated within a residential community and golf club, and were listed on the National Register of Historic Places (NRHP) in June 2015 (Smith and Deter-Wolf 2014).

Despite its historic visibility and likely role as a preeminent regional center, there has been no broadly available discussion of the Glass Mounds site published to date. Accounts of various nineteenth and early twentieth century investigations appear in contemporaneous newspapers and archaeological literature, but while aspects of those antiquarian efforts have been reported (Moore and Smith 2009; Smith and Deter-Wolf 2014) they have not been comprehensively synthesized. In addition, information recovered during two modern archaeological studies exist only as entries in the regional "grey literature" (Anderson and Cochrane 2001; Deter-Wolf 2013). Herein we seek to remedy the shortfall of information on Glass Mounds, at least in part, through describing the results of archival and museum research and modern archaeological testing. Together these lines of evidence provide a general historical and archaeological

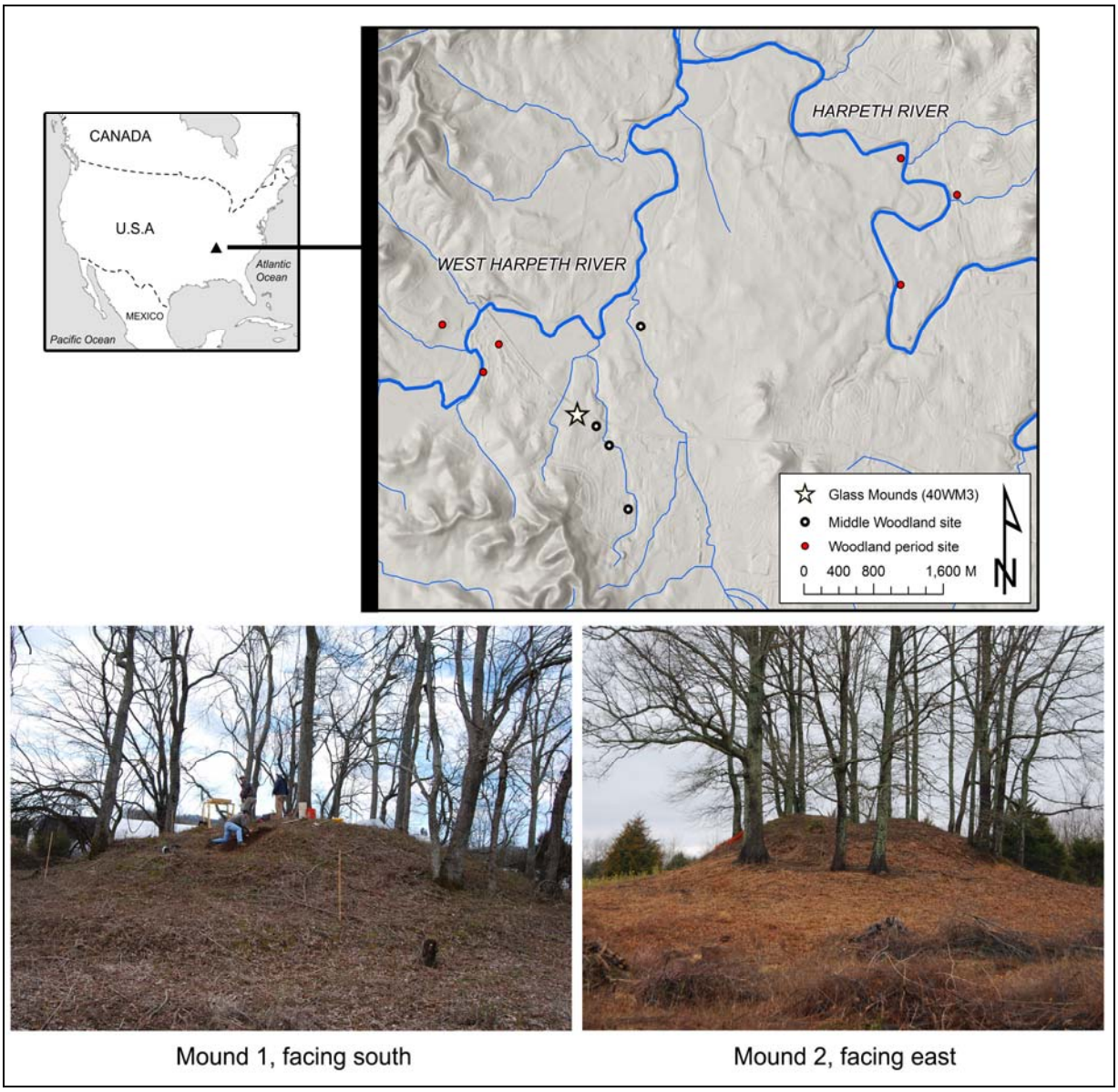

FIGURE 1. Map of the Glass Mounds site location and views of Mounds 1 and 2 from March, 2013.

picture of the site, as well as a preliminary framework for future discussions of the Woodland sequence in Middle Tennessee.

Site Description and History

The Glass Mounds site, also known as Glass Mounds Discontiguous Archaeological District, is located south of Highway 96, west of the city of Franklin, Tennessee. While the site originally included at least four earthen mounds and associated activity and residential areas, only two conical mounds now survive (Figure 1). Mound 1, the smaller and easternmost of the two earthworks, today measures approximately 22 m in diameter and 2.4 m tall. Mound 2 is located around 365 m (1,200 ft) northwest of Mound 1, and presently measures approximately 26 m in diameter and 4.2 m in height.

The surviving mounds are situated at approximately 640-650 feet above mean sea level (AMSL) along a series of low, parallel ridge toes which run north/south. Several unnamed wet weather drainages bisect the area, and along with the nearby Glass Spring drain northward into the West Harpeth River (see Figure 1). The West Harpeth flows generally northeast along the western edge of Tennessee's Central Basin physiographic province near its intersection with the Western Highland Rim, emptying into the Harpeth River approximately 4 km north of the site. The Harpeth in turn flows north to its confluence with the Cumberland River near Ashland City, Tennessee. Limestone remnants of the Western Highland Rim physiographic province form steeply ascending ridge crests less than 1 km south of the site, reaching elevations of approximately 1,000 feet AMSL.

Six artifact scatters that include diagnostic Woodland period materials are recorded within a 1.2 km radius of the surviving mounds (see Figure 1). Four of those locales contain artifacts diagnostic of the Middle Woodland period. The distribution of these scatters suggests that habitation and activity areas associated with the Glass Mounds may once have spread across much of the area between the ridge crests and the West Harpeth River.

The earliest accounts of antiquarian and scientific interest in Glass Mounds date to the latter third of the nineteenth century. At that time the site was part of the approximately 1,000-acre Pleasant View Farm owned by Samuel Fielding Glass, Jr. (1820-1896) and Agness W. Hunter Glass (1824-1898). Their home, the Samuel F. Glass House, consists of a two-story brick residence completed in 1869 and listed on the NRHP in 1988 (Thomason and Matter 1987). The Glass homestead is located approximately 600 m north of the surviving mounds and faces north towards the original route of Old Charlotte Pike as it approached the West Harpeth River. That portion of Old Charlotte Pike was abandoned following completion of State Route 96 in 1965.

Smithsonian Excavations

In early 1875, Joseph Henry, the first Secretary of the Smithsonian Institution, wrote to a number of Tennessee citizens asking for assistance in collecting specimens for the United States National Museum. A fire in January of 1865 had destroyed significant portions of the museum's early collections (DesRochers 2012), and the approach of the United States Centennial -- to be celebrated in concert with the first major world fair and exposition held in the country -- required acquisition of new materials. Among those individuals Henry contacted was Dr. William Martin Clark, a physician and resident of Franklin, Tennessee and later the editor-in-chief of the *Nashville Banner* (Clayton 1880).

On February 3, 1875, Henry wrote Dr. Clark asking that he provide assistance in obtaining materials for "...an exhaustive work on the 'Stone Age of America'" (Smithsonian Institution Archives: Joseph Henry to W.M. Clark, Letter of 3 Feb 1875, Record Group 33, Smithsonian Institution, Office of the Secretary, Correspondence 1865-1891). Clark quickly responded affirming his desire to assist, and in a letter dated February 19 Henry provided an appropriation of $50.00 from the Smithsonian treasury to offset Clark's costs. Henry further asked that Clark "kindly forward us any object you and your neighbors may be inclined to present to us for the National Museum so that we may have a better idea of what is

to be looked for in your neighborhood," and specifically requested procurement of "a stone sarcophagus, with the stones properly numbered and marked and a diagram, so that it can be reset up in the National Museum" (Joseph Henry, letter to W.M. Clark, 19 February, 1875, Smithsonian Institution Archives Record Group 33, Smithsonian Institution, Office of the Secretary, Correspondence 1865-1891].

Clark began his efforts on behalf of the Smithsonian in May of 1875 with the excavation of an earthen mound on the farm of Dr. William Reid, near Franklin.[1] From there, Clark shifted his efforts to the nearby Glass property, of which he wrote:

> *There is a fine group here, and four of them are in a line from north to south, a large one in the centre [sic], flanked on the south by two small ones, and on the north by another, evidently intended to have been a large one, but from some interruption was never finished. This last was not more than three feet high, though seventy-five feet in diameter. It had been cultivated a great number of years, but distinctly showed its proportions. Being in cultivation at the time of my visit, I did not examine it. The two smaller ones were about six feet high and twenty in diameter, while the largest was twenty feet high and four hundred feet in circumference. They did not stand in a perfect circle, the largest mound forming the lowest part of the concavity* (W.M. Clark, "Antiquities of Tennessee," MS 2407, National Anthropological Archives, Smithsonian Institution, Page 10).

In his account, Clark mentions four mounds (identified herein for reference as Clark-A, Clark-B, Clark-C, and Clark-D): Clark-A stood ca. 6 m in height and 40 m in diameter and most closely matches Mound 2 at the Glass Mounds; Clark-B and C were located to the south and each measured ca. 2 m in height and 6 m in diameter; and Clark-D, situated to the north, measured ca. 1 m in height and 23 m in diameter. The surviving Glass Mounds Mound 1 may be either Clark-B or Clark-C, although the information provided by Clark is insufficient to determine which. Neither of the two surviving mounds at the Glass Mounds site match the dimensions of Clark-D.

Clark excavated two trenches into the largest mound at the site (Clark-A; Glass Mounds 2), beginning on opposite faces and meeting in the center. Within the mound he encountered a layer of ashes and burned earth five feet below the summit, with similar sequences recurring every five feet until the base of the mound. Clark records that the mound was constructed on top of a four-foot deep deposit of burned earth, ashes, and charcoal, from which he recovered "the only relics" from the excavation (W.M. Clark, "Antiquities of Tennessee," MS 2407, National Anthropological Archives, Smithsonian Institution, Page 11). Those materials consisted of a copper earspool and hammered copper face plate (Figure 2) (National Museum of Natural History, Smithsonian Institution [NMNH] A19987-0 and A19986). No skeletal remains were present within the basal mound deposit, suggesting that these artifacts represent either a cache of ritual objects, or perhaps were associated with a cremation or completely degraded grave. The mask in particular fired Clark's imagination, leaving him to ponder:

> *Could it speak, what tales it could tell of the red men. No doubt it has witnessed many a torture of captives and heard them shriek, as their hearts were torn*

FIGURE 2. Copper faceplate (NMNH A19987-0; © David H. Dye).

from their living bodies and thrown upon the fire to appease the vengeance of their captors. Now how low it has fallen! A small fragment of copper handed down from an antiquity far beyond our conceptions, only a slight token of the mythical nations (W.M. Clark, "Antiquities of Tennessee," MS 2407, National Anthropological Archives, Smithsonian Institution, Page 12).

Clark next proceeded to open the two smaller mounds (Clark B and C). In the one closest to the large mound he recovered nothing, "it having been previously opened and examined by Dr. Joseph Jones of New Orleans" (W.M. Clark, "Antiquities of Tennessee," MS 2407, National Anthropological Archives,

Smithsonian Institution, Page 14).[2] In the second small mound, Clark identified the poorly-preserved remnants of a grave, which he asserted to be that of an older male exhibiting antemortem tooth loss. An oval piece of galena weighing around 3 lbs. was present in the grave, as well as a copper "bobbin" earspool (NMNH A19984-0 and A19985). The later was located near the individual's jaw and featured:

> *...about eight inches of flax thread, and through its center was a piece of cord. This thread and cord is green with the copper and it still retains some degree of strength. I say it is flax, but of that I am not certain, and I only submitted it to a pocket microscope, and it had every appearance of flax. It certainly is not of animal texture but is vegetable. It had evidently been hanging around the neck of the skeleton … The fragment of thread is coated with some kind of gum, probably asphaltum, and that, no doubt, contributed to its preservation* (W.M. Clark, "Antiquities of Tennessee," MS 2407, National Anthropological Archives, Smithsonian Institution, Page 15).

Clark ultimately shipped almost 220 objects from Williamson County to the NMNH, including the four from the Glass Mounds. On Wednesday, May 12, 1875 the *Louisville Courier-Journal* received a telegram reporting Clark's discoveries at the Glass farm:

> *Paleontological Discovery: A Nashville Special to the Courier-Journal, dated May 12th, says: Dr. William Clark, paleontologist of the Smithsonian Institute for Tennessee, in digging mounds near Franklin, yesterday, made a remarkable discovery of chalk beads, once glazed red, two copper bobbins with hempen or flaxen thread around them, and the representation of an idol indented on copper plate metal, much corroded. He says these must have been the work of Aztecs, or at least of civilized people. All were found sixteen feet below the top of the mound* (*Louisville Courier-Journal* 13 May 1875).[3]

Peabody Museum Excavations

The Glass Mounds site was again subject to archaeological testing in March 1879 by Edwin Curtiss, working on behalf of the Peabody Museum of Archaeology and Ethnology at Harvard University. Since 1877 Curtiss, a former tailor and railroad construction contractor, had worked under the direction of Peabody curator Frederic Ward Putnam to investigate sites in the Nashville area in order to provide materials to bolster the museum's collection (Moore and Smith 2009). Curtiss's visit to Glass Mounds took place just four years after Clark's work, but by 1879 only two mounds were present, which Curtiss describes as being "twelve hundred ft apart" ("Notes by E. Curtiss Col. from Mrs. Hayes Farm, 1879 [March 1879] Hayes Farm and Glass Farm," Peabody Museum of Archaeology and Ethnology Archives, Accession Number 79-4, pages 35--39. See also Moore and Smith 2009: Appendix C). Based on this description it appears that during the period 1875-1879 two of the site's four mounds were destroyed, leaving only Glass Mounds 1 and 2.

Curtiss noted that the smaller of the surviving mounds had been excavated by Clark, and so focused his investigations on the larger of the two, which he describes as measuring approximately 5.8

FIGURE 3. Curtiss' sketch of the mound he excavated at Glass Mounds in 1879, likely Glass Mounds 2 (after Moore and Smith 2009:Figure 209; Accession File 79-4, Peabody Museum Collections Department, Harvard University).

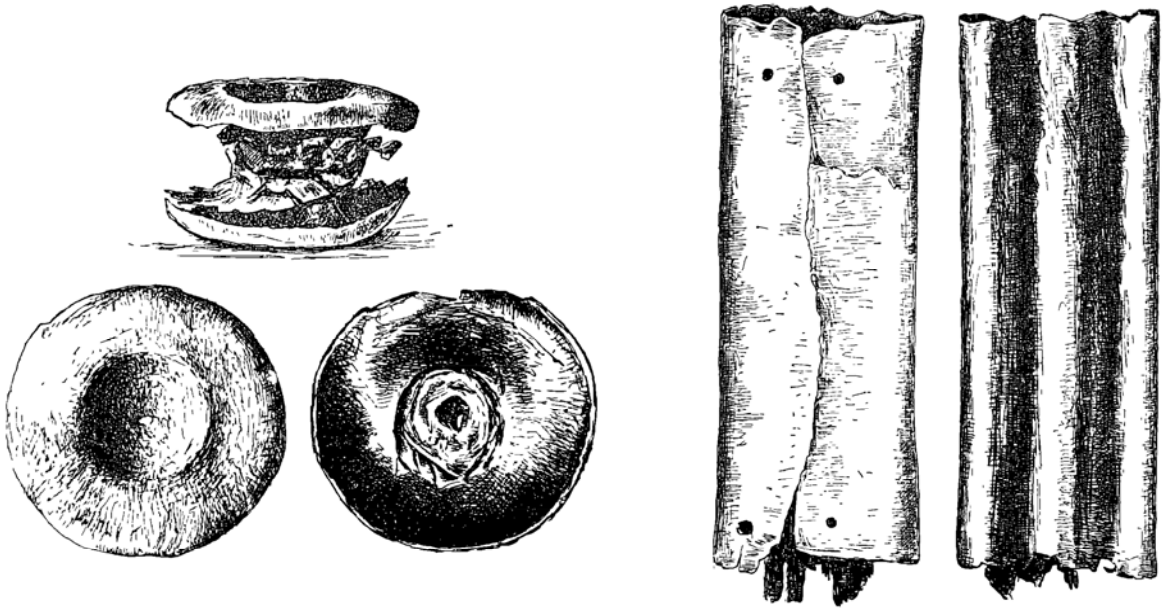

FIGURE 4. Views of a copper earspool and "panpipe" recovered by Curtiss from Mound 2 at Glass Mounds (PMAE 79-4-10/18310 and 79-4-10/18313; after Putnam 1882: Figures 16, 18, and 19).

m high and 15 m in diameter. That description and an accompanying sketch of the mound profile (Figure 3) suggest that Curtiss worked on Mound 2, although his estimate of the diameter varies greatly from that recorded by Clark. Curtiss cut a massive trench (approximately 10.5 m long by 1.8 m wide and 6.4 m deep) into the center of the mound, wherein he encountered construction sequences,

multiple burials, and artifacts including ceramics, faunal remains, copper, mica, and galena.

At a depth of around eight feet, Curtiss encountered a poorly preserved adult burial with two copper earspools (Figure 4) and probable marine shell beads stained by contact with the copper items (Peabody Museum of Archaeology and Ethnology [PMAE], 79-4-10/18309-18311). From this same general depth he recovered multiple mica sheets (PMAE 79-4-10/18312 and /18315), a three-tube copper "panpipe" (PMAE 79-4-10/18313) (see Figure 4), and a copper axe (PMAE 79-4-10/18314). At a depth of 20 feet he notes encountering "paint and a piece of mica" ("Notes by E. Curtiss Col. from Mrs. Hayes Farm, 1879 [March 1879] Hayes Farm and Glass Farm," Peabody Museum of Archaeology and Ethnology Archives, Accession Number 79-4, pages 35--39. See also Moore and Smith 2009: Appendix C).

Other artifacts in the Peabody Museum collection from Curtiss's work at Glass Mounds lack specific provenience, but include fragments of animal bone (PMAE 79-4-10/18317-18318), limestone tempered cordmarked and plain pottery sherds (PMAE 79-4-10/18319), a lump of galena/lead ore (PMAE 79-4-10/18320), a possibly modified stone (PMAE 79-4-10/18321), a fragment of burned clay (PMAE 79-4-10/18322), a chert flake with and animal bone fragment (PMAE 79-4-10/18325), and a corner-notched projectile point (PMAE 79-4-10/18323).

William Glass Polk

During the early twentieth century, William Glass Polk, the great-grandson of Samuel F. Glass, Jr., accumulated a collection of approximately 30,000 Native American artifacts from throughout Middle Tennessee. Polk exhibited a portion of this collection in 1933 as a sophomore at Duke University, at which time the campus newspaper noted that "Famous archaeologists from all over the country have expressed interest in the work of Mr. Polk. Various dealers have attempted to purchase the collection, but he has always been desirous of keeping the relics in the South" (*The Duke Chronicle* 1933).

Polk conducted excavations at several mound sites in Williamson and Davidson Counties (Polk 1948), and materials he recovered from these and other sites were later donated to the Tennessee State Museum (TSM) as the William Glass Polk Collection. In addition to artifacts, the TSM collection includes an untitled manuscript in which Polk describes his finds and the archaeology of "the prehistoric race of North America." In that unpublished work, Polk includes a description of excavations at the Glass Mounds, and presents a map ostensibly depicting the site (Figure 5). The Polk map is notable in that it is the only known historic map purporting to show the site layout. Unfortunately, the veracity of both the map and Polk's description are suspect.

Historic evidence demonstrates that only two mounds remained at the Glass Mounds site by 1879. Nevertheless, Polk's map and accompanying account from at least 30 years later identify the presence of four (in the text) or five (on the map) earthen mounds. Polk describes two small mounds "flanking" Clark A (Glass Mounds 2) to the north and south, rather than both being located to the south as indicated by Clark (W.G. Polk manuscript, Tennessee State Museum, page 15). The Polk map additionally shows a small, fifth mound to the east, as well as a line of earthen "fortifications"

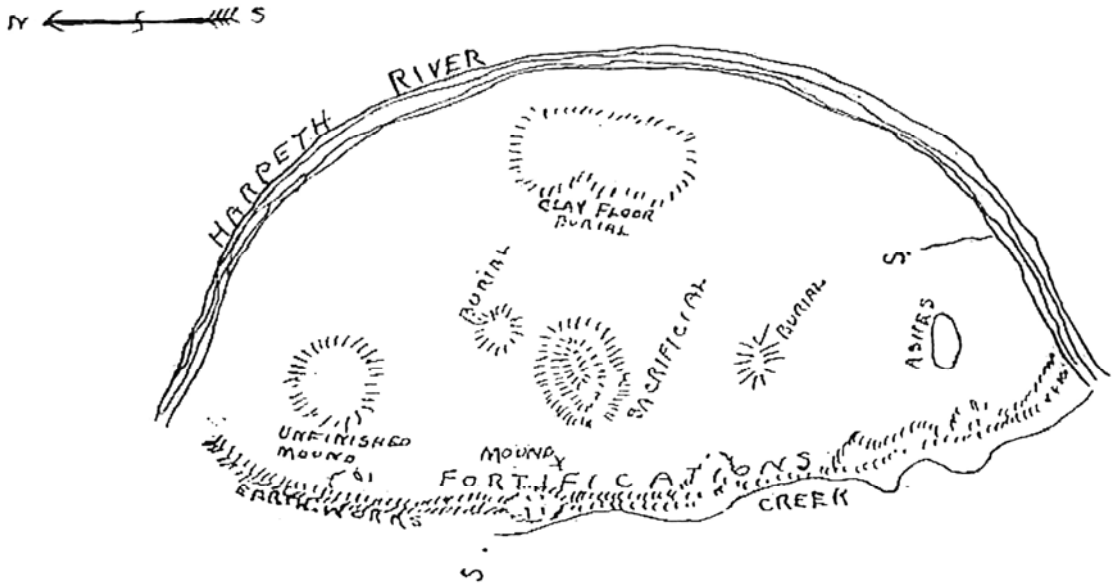

FIGURE 5. Map allegedly depicting the Glass Mounds site (after W.G. Polk manuscript, Tennessee State Museum, page 15).

restricting the site within a bend of the Harpeth River.

Although Polk's account is presented in the first person, the section describing his excavations at Glass Mounds is largely plagiarized from Clark's published (1878) report. Polk's description of excavations into Clark-A (Glass Mounds 2) draws verbatim from Clark's methodology and discussion of mound stratigraphy, although omits any mention of recovered artifacts. Polk also records that, like Clark, he examined two smaller mounds (Clark B and C), one of which he says contained nothing. Polk's account diverges from the 1878 Clark text as he recounts that within the second small mound he discovered the grave of a "very old man" including "a fine string of pearls and a handful of razor-like flint slivers" (W.G. Polk manuscript, Tennessee State Museum, page 16). He then goes on to describe several previously-unrecorded features at the site including a mass grave east of the large mound, indicated on the map as "clay floor burial" (See Figure 5; W.G. Polk manuscript, Tennessee State Museum, pages 16-17).

Polk's account of excavating two small mounds on the Glass farm stands in contrast to Curtiss' description from 1879, by which time only one such mound remained. It is further doubtful that Clark overlooked a grave within that same mound, and that neither Clark nor Curtiss recognized the presence of a palisade at the site. Finally, the placement and orientation of the Harpeth River on the Polk map relative to the mounds does not match actual site geography. While Polk did indeed excavate, or at least obtain artifacts from archaeological sites throughout the Nashville area, his manuscript should be regarded with skepticism, at least as it pertains to the Glass Mounds site.[4]

Destruction, Development, and Conservation

During the 1960s to 1980s, the portion of Pleasant View Farm south of State Route 96 was subjected to strip mining for phosphate, a practice that emerged as a major industry in Middle Tennessee during the late nineteenth and early twentieth centuries (Keys 2017). In Williamson County, phosphate was primarily contained within a "brown rock" stratum averaging 30 to 60 inches in thickness. This material was extracted by stripping away between 6 and 20 feet of overburden using a drag-line, scraper, or steam shovel. Strip mines ranged from a single acre to more than 200 acres in size. An unknown percentage of the Glass Mounds site was destroyed by phosphate mining during the mid-twentieth century, leaving only the two mounds and areas immediately surrounding them potentially intact.

Around 2000, land south of State Route 96 that contained the surviving mounds was purchased by the Southern Land Company. Later that year the company contracted the now-defunct cultural resources management firm of DuVall & Associates to perform archaeological survey and testing of approximately 1,000-acres as part of planning for the proposed Westhaven residential development. During the Phase I survey, shovel tests were placed adjacent to both Mound 1 (three 30x30 cm units) and Mound 2 (seven 30x30 cm units). Those investigations suggested substantial soil disturbance had taken place around both mounds.

Six backhoe trenches of various lengths were subsequently placed around Mound 1, and four additional trenches around Mound 2. No specific map of testing locations appears in the project report, and it is not clear where the backhoe trenches were placed relative to the mound footprints. However, the investigators note that "terrain surrounding both mounds, up to a radius of 100 meters, exhibited a sweeping 100% vertical and horizontal disturbance as a result of phosphate mining" (Anderson and Cochrane 2001:78).

A notable exception to this assessed pattern of disturbance was noted in three backhoe trenches within "a limited section of terrain on the south edge of Mound 1" (Anderson and Cochrane 2001:78). Intact deposits within this area included an "activity surface" and eight features, most of which "…had little or no vertical depth. In terms of distinguishing characteristics, they seemed merely to contain a higher density of artifacts and/or burned substances than the surrounding matrix" (Anderson and Cochrane 2001:79). The intact deposits were capped by up to a meter of disturbed soils, and in summary analysis the authors reasoned that stockpiling of displaced soils in this location during phosphate mining may have inadvertently resulted in protection of a limited portion of the site area.

DuVall & Associates recovered ceramic artifacts diagnostic of the Woodland period from shovel tests, trenches, and features adjacent to Mound 1 (Table 1). No specific provenience information for the recovered ceramics is given in the project report beyond their general association with Mound 1.The area around Mound 1 also yielded lithic debitage, burned clay, charcoal, and unknown quantities of unspecified bone (Anderson and Cochrane 2001:Table 4). No lithic raw material types are identified in the project report, and the present location of the artifact collection is not known. Shovel testing and trench excavation in the area surrounding Mound

TABLE 1. Ceramic Artifacts from the Mound 1 Vicinity, with Assigned Types as Identified by Anderson and Cochrane (2001:83).

Count	Description	Assigned type
2	Sand-tempered plain	Similar to Connestee Plain
2	Sand-tempered simple stamped varieties	Similar to Connestee Simple Stamped
1	Sand-tempered fabric marked	Similar to Connestee Fabric Marked
6	Limestone-tempered fabric impressed and/or smoothed-over fabric impressed	similar to Long Branch Fabric Marked
24	Limestone-tempered plain	Similar to Mulberry Creek Plain
3	Limestone-tempered check stamped	Similar to Wright Check Stamped
4	Limestone-tempered simple stamped	Similar to Bluff Creek Simple Stamped
3	Limestone-tempered cord marked	Similar to Flint River or Candy Creek Cord Marked
1	Limestone-tempered wide cord marked pode	Similar to Hamilton Creek Cord Marked

FIGURE 6. Toye Heape and Pat Cummins of the Native History Association unveiling the Historical Marker during a dedication ceremony, 20 Sep 2014.

2 revealed disturbed soils extending to a depth of 1.5 m below ground surface. No artifacts were recovered during excavations or noted in trench backdirt from the area around Mound 2.

In the final report on investigations, DuVall and Associates recommended that the developer maintain at least a 20 m "no-impact" zone surrounding the base the base of each mound. The area surrounding Mound 1 was incorporated within a staging and maintenance area for the development project, while the Westhaven Golf Club was constructed to the south of Mound 2. The recommended minimal buffer zone around each mound was maintained throughout the development process.

Although the two mounds were protected from development, no upkeep or stabilization efforts took place at Glass Mounds until 2012. That year, the Tennessee Ancient Sites Conservancy (TASC) organized a volunteer effort to remove trash, underbrush, and small woody growth from both mounds. TASC conservation efforts at Glass Mounds also included establishment of a Tennessee Historical Marker (Figure 6; number 3D-81, dedicated in 2014), as well as discussions with the developer regarding transfer of a conservation easement. Other groups involved in the initial consultation regarding that easement

included members of the local Native American community, and the Alliance for Native American Indian Rights. Several media outlets have since reported Southern Land's intention to transfer a conservation easement on the Glass Mounds to TASC (e.g., Vissman 2015; Walters 2012, 2014). However, as of 2020 no transfer has taken place.

Confused Names and Synonymy

As noted previously, before shifting his operations to the Glass Mounds, Dr. Clark placed a large trench in a mound atop Reid Hill, about a mile to the east. This mound was reported by Jesse Jennings (1946) as:

> *atop Reid Hill, a knob 140 feet high… built on the flat top of the hill, the conical mound measures 18 feet high by 80 feet in diameter. The mound is built of stones and earth. (These stones are large and numerous. It is essentially a stone mound.) A deep trench had been cut into the east side of the mound but no sherds, flint, or other material were visible…. I was unable to learn who dug into the mound so do not know whether artifacts were recovered.*

Almost certainly, the trench observed by Jennings was that of Clark from 1875. In the modern archaeological literature, Reid Hill has sometimes been confused with the Glass Mounds, also mentioned by Jennings (1946):

> *a second important site… lies one mile west of the Reid Hill site… two conical or domed mounds. These are 9 feet high, 50-60 feet in diameter. There is a mound on each of two parallel low ridges which run north and south (perpendicular to the river). Both are now protected by tree growth but have been pitted in the past. No pottery could be found but there were large quantities of flint scrap and broken projectile points in the fields around the mounds*

While more recent archaeological information is unavailable for the Reid Hill site, it is clearly not the same as the Glass Mounds.

Additionally, in some notable publications (e.g. Seeman 1979:262-273; Turff and Carr 2005), the Glass Mounds have been referred to as "the Franklin Site" or the "Franklin Mounds." In other cases (e.g. Ruhl 2005), the artifacts from the Smithsonian and Peabody excavations were identified as from the Glass site (Peabody collections) and the Franklin site (Smithsonian collections). All of these published discussions concern objects clearly obtained from excavations at the Glass Mounds site (40WM3) discussed herein, and future citations in the literature will hopefully benefit from the assertion that "Glass Mounds" is the most appropriate and least confusing reference.

Finally, several other mound sites in Williamson County were completely destroyed or heavily damaged by phosphate mining, including a (presumably) Mississippian site known in nineteenth and early twentieth century as the West Harpeth Mounds. During the 1980s, the name "West Harpeth Mounds" was applied erroneously to the Glass Mounds by some collectors, historians, and journalists [e.g., "Highway 96 Closes Gap Between Towns, History," *Nashville Tennessean*, 21 Aug 1985]. At least three known photographs from different private collections taken in the 1980s show one of the Glass Mounds labeled as "West Harpeth Mounds."

2013 Excavations

In March, 2013, staff of the Tennessee Division of Archaeology (TDOA) directed limited mapping and archaeological testing at Glass Mounds in order to assess the integrity of the site's two remaining earthen mounds in anticipation of preparing a nomination for the NRHP (Deter-Wolf 2013). The work was performed with the assistance of volunteers from Middle Tennessee State University (MTSU), the Native History Association, and the Williamson County Archaeological Society, and included a combination of auger testing and test unit excavation.

Mound 1

Archaeological testing of Mound 1 included the excavation of two 1x2-m test units along the mound slopes, and placement of four 4-inch bucket auger tests on the margins of the mound summit (Figure 7). Four auger tests were placed at cardinal directions along the margins of the mound summit and excavated to a maximum of 2.5 m below mound surface. Three of the auger tests (Tests 1, 2, and 4) revealed up to 1.45 m of homogenous dark brown silty clay loam matrix. This stratum was underlain by a thin (<10 cm) lens of very dark gray silty clay loam, which in turn rested immediately above subsoil (see Figure 7). No artifacts were recovered from Mound 1 during auger testing.

Test Unit 1 was placed along the southwestern skirt of Mound 1 in an effort to identify the mound/plaza transition and examine the premound surface, while test Unit 2 was placed midway down the northeast slope. Both excavation units revealed strata consisting of homogeneous dark brown silty clay loam overlaying strong brown silty clay subsoil, with no evidence of fills or mound construction activity. Artifacts recovered from the test units are described in Table 2. Notably, several fragments of blue and clear plastic sheeting were recovered from Unit 2 at 100-125 cm below surface within the principal soil matrix.

TABLE 2. Artifacts Recovered from Mound 1 during 2013 NRHP Testing.

Location	Count	Description
Test Unit 1, 0-60 cmbs	3	Tertiary flakes; Fort Payne chert
	2	Chert shatter; 1-Fort Payne, 1-Thermally-altered
	1	Calcined bone; unidentifiable
Test Unit 2, 0-40 cmbs	2	Primary flakes; Fort Payne Chert
Test Unit 2, 40-70 cmbs	2	Tertiary flakes; Fort Payne Chert
	6	Limestone-tempered sherds; two with faint check stamping
	12	Residual ceramic sherds
Test Unit 2, 100-125 cmbs	1	Primary flake; Fort Payne chert
	1	Secondary flake; Fort Payne chert
	1	Tertiary flake, Fort Payne chert
	5	Fragmented blue and clear plastic sheets

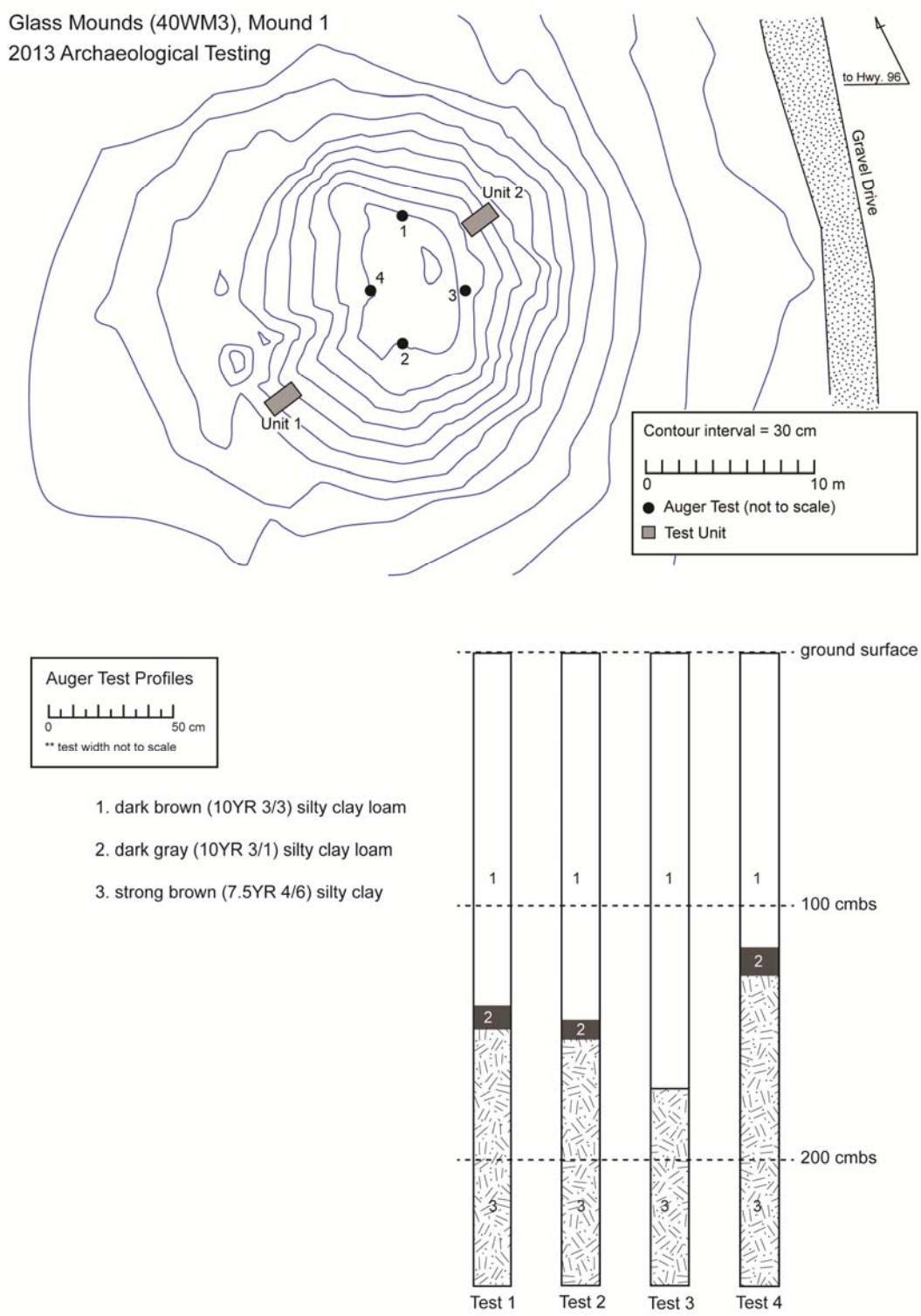

FIGURE 7. Contour map of Mound 1 showing test locations (top) and auger test profiles (bottom).

TABLE 3. Artifacts Recovered from Mound 2, Test Unit 2 during 2013 NRHP Testing.

Location	Count	Description
Stratum I	1	Chert shatter; unidentifiable thermally-altered material
Stratum II	1	Tertiary flake; Fort Payne Chert
	1	Flake fragment; St. Louis chert
	2	Bone fragments; unidentifiable
Stratum III, above 100 cmbs	1	Tertiary flake; unidentifiable thermally-altered material
	2	Chert shatter; unidentifiable thermally-altered material

Mound 2

Archaeological testing of Mound 2 included the excavation of two 1x2-m test units and placement of five 4-inch bucket auger tests on the margins of the mound summit (Figure 8). Auger tests were placed in the center and at cardinal directions along the margins of the summit outside of the projected dimensions of Clark's 1878 trench, and excavated to a maximum of 4 m below surface. Four auger tests (Tests 1-4) revealed up to 1.6 m of dark yellowish brown silty clay loam underlain by layers of dark gray to dark brown silt loam. Those included fragments of burned earth and terminated within extremely dry light yellowish brown silt. The final auger test (Test 5) was situated in the center of the mound summit, and revealed soils consisting of dark yellowish brown silty clay loam extending to >4 m below surface. No artifacts were recovered from auger tests.

Test Unit 1 was placed on the southeastern margin of the mound summit in the hopes of uncovering the interface between Clark's 1878 trench and intact mound deposits. That unit yielded dark yellowish brown silty clay loam extending to at least 1.8 m below surface. Three tertiary flakes (2-Fort Payne; 1-thermally altered) were recovered within Test Unit 1. Based on soil profiles, the unit appears to have been located within the footprint of the historic excavation trench.

Test Unit 2 was placed on the southwest face of the mound and revealed evidence of intact mound construction (Figure 9). The unit was terminated at 120 cm below ground surface following identification of intact soils and concurrent assessment of NRHP-eligibility. Artifacts recovered from Unit 2 are described in Table 3. Soils initially encountered within the unit consisted of an Ap horizon (Stratum I) comprised of up to 46 cm of silty clay loam. Rather than plow disturbance, Stratum I may represent historical deposition of backdirt discarded during antiquarian excavations by Clark and/or Curtiss.

Stratum II consisted of 16–34 cm of dark yellowish brown silty clay loam. Excavations recovered a single tertiary flake, flake fragment, and two poorly-preserved bone fragments. Based on its relatively homogeneous composition, Stratum II likely represents a massive fill episode, in which an earlier mound summit was capped using soils from a single source (Sherwood 2011; Van Nest et al. 2001).

Stratum III consisted of very dark brown silty clay loam, interrupted approximately 80-100 cm below surface on the north wall profile by a thin, roughly-horizontal band of dark gray silty clay loam (Stratum V), believed to represent an early mound surface (see Figure 9).

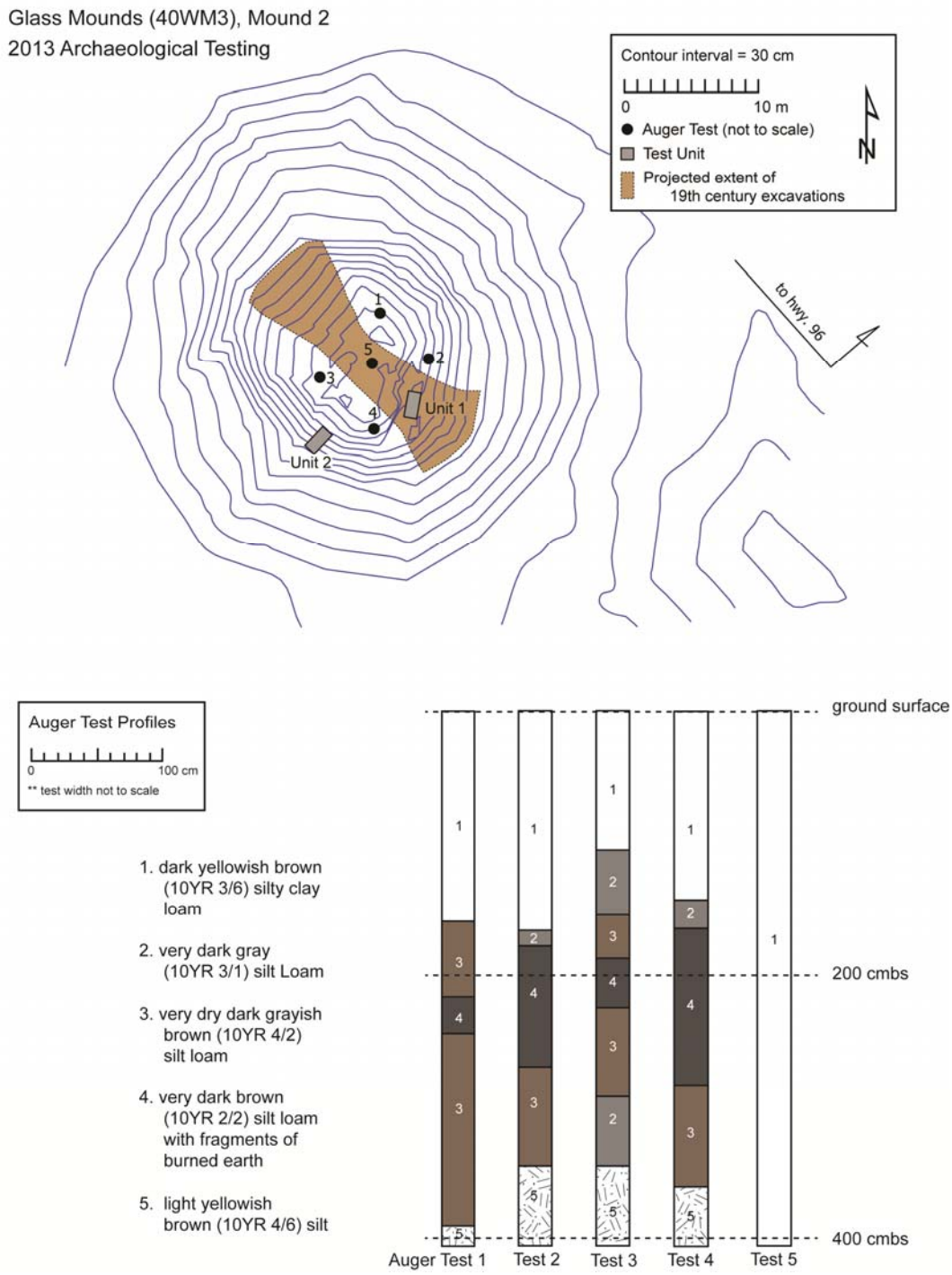

FIGURE 8. Contour map of Mound 2 showing test locations (top) and auger test profiles (bottom).

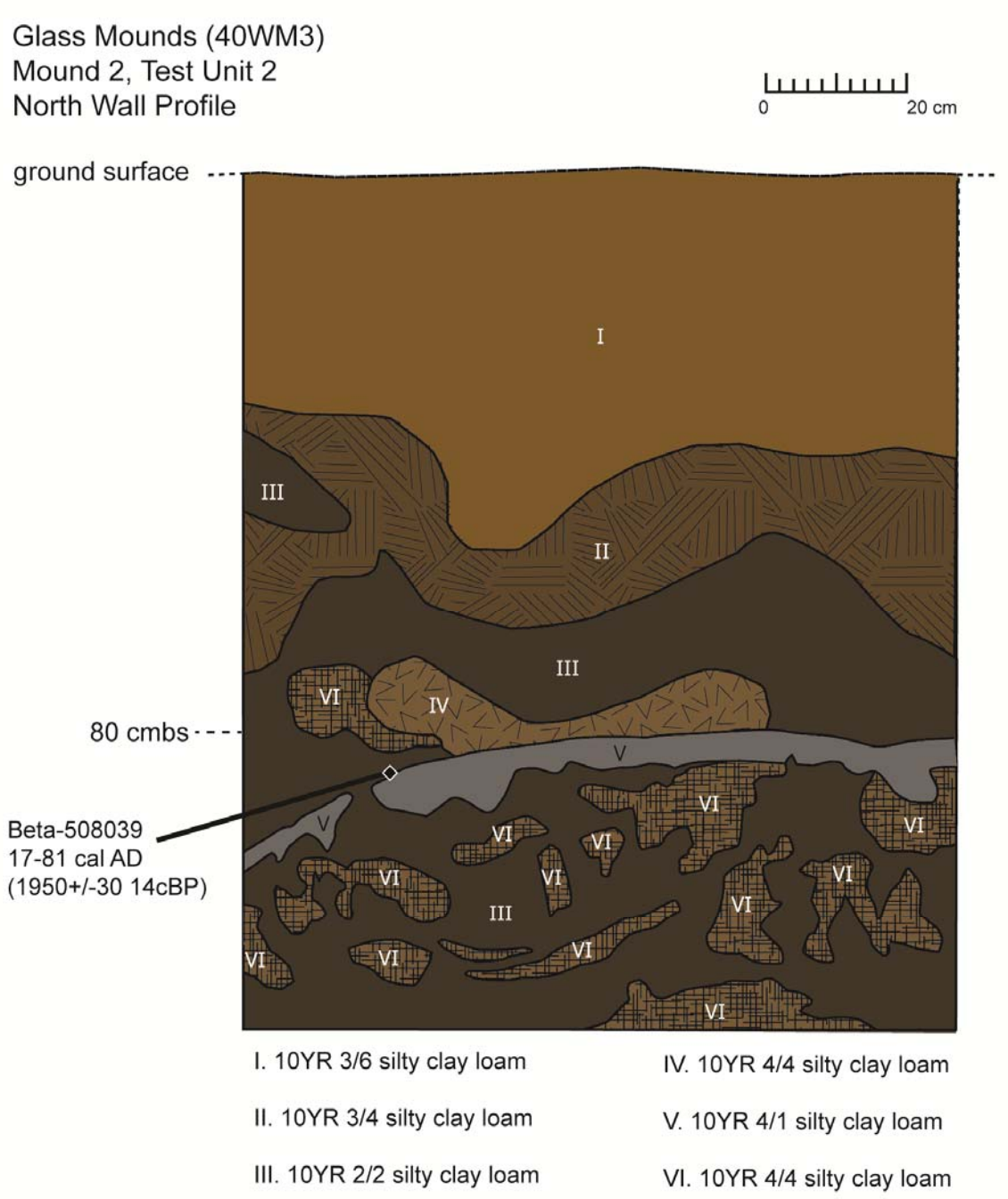

FIGURE 9. Profile drawing of Mound 2, Test Unit 2.

Above this break, Stratum III produced a single tertiary flake and two pieces of lithic shatter. A roughly circular deposit of dark gray loam measuring 15 cm in diameter, <1 cm thick, and containing charcoal flecking was identified on the Stratum V surface during excavation. A radiocarbon sample from that deposit was submitted to Beta Analytic of Miami, Florida for radiocarbon analysis, and returned a date of 1950+/-30 ^{14}C BP (17-81 cal AD in INTCAL13; d^{13}C=-24.0 o/oo; unidentified

charred material; Beta-508039).

Beneath Stratum V, the mound fill consisted of dark brown silty clay loam identical in color and texture to Stratum III. This primary matrix was interspersed with discrete pockets of brown silty clay loam (Stratum VI). Soils beneath Stratum V may reflect early mound construction via compositional loads obtained from at least two separate source locations. The clear boundaries and irregular shapes of the Stratum VI pockets are not consistent with earthwork construction using sod bocks, a building technique documented within Hopewell mounds in the Illinois Valley and elsewhere in the Eastern Woodlands (Sherwood 2011; Van Nest et al. 2001). No artifacts were recovered within or beneath Stratum V.

Discussion and Conclusions

Today Mound 1 at Glass Mounds stands approximately 2.4 m above the surrounding terrain. While the height of Mound 1 most closely matches with Clark's description of the two smaller mounds at the site (Clark B and C), its diameter is significantly wider than Clark's size estimate of 6 m (20 ft). The precise extent of historic excavation into either of the small mounds at the site is not clear, although based on Curtiss's account it would seem that the collective efforts of Jones and Clark resulted in the destruction of at least one of those earthworks. Given the description provided by Clark, it is reasonable to assume his work at the second small mound was similarly invasive.

Excavations in 2013 did not identify any conclusive evidence of intact mound fill or construction sequences within Mound 1. Although a small collection of prehistoric artifacts were recovered, overall soil profiles and fragments of plastic sheeting from 1–1.25 m below surface in Test Unit 2 suggest that much of the mound profile visible today consists of secondary soil deposition. It is possible that the accumulation of mounded soils in this location is the result of stockpiling or other soil moving associated with twentieth century phosphate mining. Auger Tests 1, 2, and 4 all identified a thin band of very dark gray silty clay loam situated 1.16–1.45 m below ground surface and immediately underlain by silty clay subsoil. Although no artifacts were recovered from this deposit during the testing effort, the stratum appears to be a buried, intact archaeological soil. The scale of the 2013 investigations was not sufficient to conclusively assess the nature of the buried deposit. However our assessment based on the available data is that this stratum likely represents either remnant mound construction, or an area of pre-mound midden.

Mound 2 at Glass Mounds today measures approximately 4.2 m (14 ft) in height, approximately 7 feet lower than it did in the 1870s. This discrepancy is likely the result of a combination of factors, including erosion and historic excavation. Nevertheless, Test Unit 2 and four of the auger tests excavated in 2013 identified intact archaeological deposits including construction episodes and probable loaded fills. Towards the mound summit, these deposits are capped with up to 1.6 m of disturbed soils likely representing the cumulative backdirt of historic excavations.

In 2013 the summit of Mound 2 exhibited a cleft approximately 35–40 cm deep running northeast/southwest across the earthwork (see Figure 8). The orientation of this feature and stratigraphy of the central auger test suggest the anomaly presents the remnants of antiquarian excavation by Clark and/or

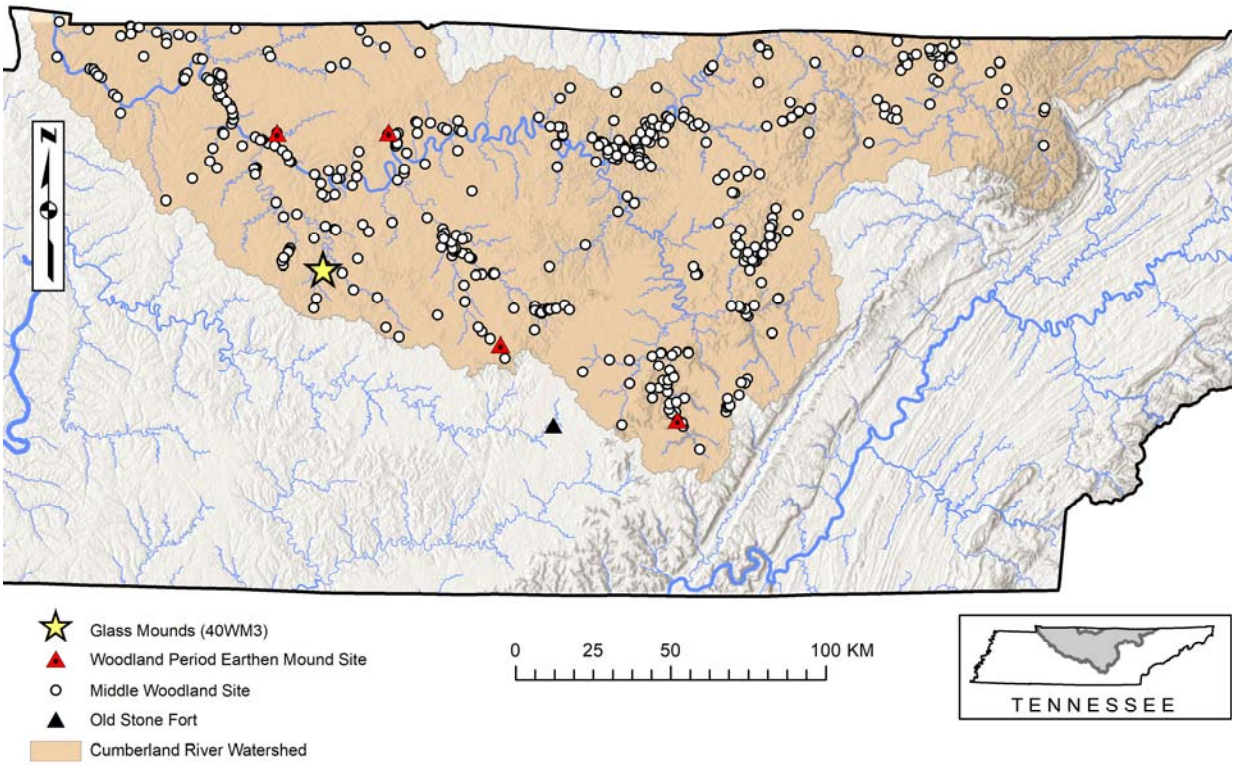

FIGURE 10. Map showing Middle Woodland sites and Woodland period mounds in the Cumberland River watershed of Tennessee.

Curtiss. Accounts by both these antiquarian scholars describe excavation of massive trenches cutting entirely across the central axis of the mound. Curtiss does not note the earlier work by Clark, nor does he +apparently encounter the remnants of that trench, and his 'identification of intact archaeological deposits including surfaces and burials suggest that Curtiss was not working within the footprint of Clark's excavation. Although limited in scope, the 2013 investigations did not identify any evidence of a second historic excavation trench on Mound 2. Future investigation using remote sensing techniques such as ground penetrating radar may prove useful in assessing the extent of historic disturbance to this earthwork.

A brief examination of geospatial and site file data housed at the TDOA reveals something of the unique nature of Glass Mounds at a regional scale. The Cumberland River watershed of Tennessee presently includes more than 4,900 recorded ancient Native American archaeological sites, of which only 23.7 percent (n=1,185) have produced artifacts diagnostic of the Woodland period. Just 488 are identified in the Tennessee Site File database as including Middle Woodland materials (Figure 10).[5] Only five sites in the Cumberland Basin include earthen mounds shown to originate during the Woodland period, and of those only Glass Mounds is known to be Middle Woodland in origin.[6] In addition, Glass Mounds is notable as the only definitively-identified Woodland period multi-mound site in the Cumberland River drainage of Tennessee to date. The complex Middle Woodland multi-mound/hilltop enclosure

at Old Stone Fort State Archaeological Area is located approximately 89.7 km southeast of Glass Mounds within the Upper Duck Subbasin of the Tennessee River watershed (see Figure 10).

Nineteenth century explorations of Glass Mounds yielded a series of significant mortuary artifacts that, along with the radiocarbon date presented above, connect the surviving mounds to the Middle Woodland period, and more specifically to Hopewell influence in the region. Excepting the galena, all other significant artifacts recovered from the site during antiquarian investigations demonstrate the acquisition of raw material or finished objects from great distances, including mica probably deriving from the Appalachian Summit (see Wright and Loveland 2015), marine shell beads from the Florida Atlantic or Gulf Coast (Trubitt 2003), and the various copper artifacts. The galena recovered from Glass Mounds could potentially derive from a more local source, as galena does occur in Middle Tennessee (Jewell 1947). However, sourcing studies of galena from roughly contemporaneous Copena culture mound sites in the Tennessee River valley reveal those materials were obtained from the Upper Mississippi Valley region of Wisconsin-Illinois-Iowa rather than Tennessee (Walthall et al. 1980).

The copper items from Glass Mounds have not been the subject of material science assessments to date, and the specific point of origin for their raw material remains unknown. Copper used to manufacture Middle Woodland artifacts in Tennessee has traditionally been assigned a point of origin in the Great Lakes Region. However, raw copper is also available from other regions within the Hopewell Interaction Sphere (e.g., Levine 1996; Rapp et al. 1990). Nevertheless, these items present a significant data point for assessing the distribution of copper artifacts in the Eastern Woodlands (e.g., McKnight 2007). The three-tube “panpipes” from Mound 2 at Glass Mounds present the only example of this artifact type from the Cumberland River drainage (Bacon 1986; Seeman 1995; Turff 1997; Turff and Carr 2005). Similarly, Glass Mounds is the only site in the Cumberland River drainage to have produced a copper axe (McKnight 2007), and one of only three sites to yield Hopewellian Copper earspools (Ruhl 2005).[7]

The majority of the Glass Mounds site was destroyed in the early twentieth century as a result of phosphate mining, thereby removing any possibility of understanding patterns of site-wide organization, chronology, subsistence, material culture, or non-mound architecture. Nevertheless, as the only known Middle Woodland mounds from the Cumberland River watershed of Tennessee, the Glass Mounds remain a resource of great significance for future research expanding our understanding of the prehistory of Williamson County and Middle Tennessee. Surviving intact archaeological deposits within, beneath, and adjacent to the two mounds still hold the potential to permit future examination of the nature of mound construction, ritual or ceremonial activities, and the sociopolitical interplay between local populations and the broader Hopewell Interaction Sphere. Finally, further scientific examination and iconographic analysis of artifacts recovered by antiquarian scholars promises to increase our understanding of the introduction and spread of the Hopewell Interaction Sphere throughout the Midsouth.

Following testing in 2013, the Glass Mounds site was nominated to the NRHP

as a discontiguous archaeological district comprised of areas surrounding each of the mounds (Smith and Deter-Wolf 2014). The nomination was based on eligibility under NRHP Criterion A, for contributions to the development of scientific archaeology in Tennessee, and Criterion D, for demonstrated potential to yield new insights to the prehistory of Williamson County. That nomination was accepted and the site was listed on the National Register in June, 2016.

Notes:

[1] Clark's handwritten report on his investigations, titled "Antiquities of Tennessee," (MS 2407, National Anthropological Archives, Smithsonian Institution) was submitted to Henry and dated 1875, although the manuscript is stamped as received by the Smithsonian February 28, 1876. Approximately half of Clark's original manuscript was omitted and/or edited by Henry prior to publication in the *Annual Report of the Board of Regents of the Smithsonian Institution* for 1877 (Clark 1878). Herein we rely on Clark's original manuscript.

[2] Joseph Jones (1833-1896) conducted some of the earliest documented archaeological investigations of Middle Tennessee sites during his short term as the Nashville Health Officer (1867-1868). However, nothing in Jones's published works concerning his Middle Tennessee excavations mentions work done on the Glass property (see Jones 1869, 1873, and 1876), nor is there any mention in the Joseph Jones Papers in the Special Collections, Hill Memorial Library, Baton Rouge; Joseph Jones Collection of Papers Relating to Indians of Tennessee, Division of Rare and Manuscript Collections, Cornell University Library.

[3] This telegram was reprinted as "Paleontological Discovery," *Knoxville Whig and Chronicle* 19 May 1875; "Remarkable Discoveries," *Daily Evening Bulletin* (San Francisco) 27 May 1875; and "Current News Item," *North American and United States Gazette* (Philadelphia) 3 June 1875.

[4] Elsewhere in the manuscript Polk plagiarizes descriptions by Jones (1876) of work at the DeGraffenreid and Old Town sites.

[5] Temporal affiliations assigned to site records in the Tennessee Division of Archaeology Site File Database rely on data recorded by both professional and avocational sources, and reflect the results of professional and academic survey and excavation projects, landowner accounts, and materials held in private collections. These affiliations do not necessarily reflect a wholly-accurate assessment of site occupation.

[6] Site file documentation for 40GY35 notes that a single conical mound at that site was bulldozed by the landowner in 1977, and contained a log-lined tomb holding a single individual. That information was related to TDOA staff by an informant, and neither the age nor contents of the mound were verified.

[7] Turff and Carr (2005) identify a copper panpipe from Franklin Mound 1, while Ruhle (2005:Table 19.1) includes separate entries for copper earspools from the Glass and Franklin sites. As discussed in the section "Confused Names and Synonymy," all three of these names reference the Glass Mounds site.

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TENNESSEE-CUMBERLAND TRISKELE GORGETS: DISTRIBUTION, CHRONOLOGY, AND INTERPRETATION

Kevin E. Smith

For over a century, a specific genre of Mississippian marine shell gorgets has been commonly attributed to the Cumberland River valley around Nashville, Tennessee. Referred to as the Scalloped Disk, Scalloped Triskele, and Nashville Scalloped Triskele (among others), the most masterfully crafted of these gorgets provide a "core" generally agreed upon by prior researchers, but a substantial number of "possibly" similar and somehow related gorgets on the "periphery" provided significant challenges for both definition and interpretation. With their production, use, and deposition spanning over two centuries (ca. AD 1225-1450), triskeles were produced in a series of workshops in a broad geographic area encompassing the Middle Cumberland and Upper Tennessee river valleys. Here, I report the results of nearly three decades of research and analysis of triskele gorgets including their distribution, chronology, and iconographic interpretations.

For over a century, a specific genre of Mississippian marine shell gorgets has been commonly attributed to the Cumberland River valley around Nashville, Tennessee. Referred to as the Scalloped Disk, Scalloped Triskele, and Nashville Scalloped Triskele (among others), the most masterfully crafted of these gorgets provide a "core" generally agreed upon by prior researchers, but a substantial number of "possibly" similar and somehow related gorgets on the "periphery" provided significant challenges for both definition and interpretation (Brain and Phillips 1996; Holmes 1883; Kneberg 1959; Muller 1966, 1989). With their production, use, and deposition spanning over two centuries (ca. AD 1225-1450), triskeles were produced in a series of workshops in a broad geographic area encompassing the Middle Cumberland and Upper Tennessee river valleys. While still comparatively rare in any single Mississippian site assemblage, triskelion genre gorgets (and rattlesnake genre gorgets) were produced in quantities unmatched by other identified genres or types of marine shell gorgets – suggesting distinctive patterns of distribution, function, and use meriting more detailed examination.

Over the course of the nearly three-decade-long Triskelion Survey Project (TSP), I (working with many students and colleagues) systematically compiled information on over four hundred gorgets in institutional and private collections to create as large a corpus as possible of "triskele-like" objects for analysis. This methodological approach follows that initially developed by the author and James V. Miller in the 1980s and 1990s to examine and interpret the significantly rarer Tennessee-Cumberland stone statuary (Smith and Miller 2009). The current method of analysis benefits even more substantively from the more sophisticated iconographic and stylistic approaches developed and refined by participants in the Mississippian Iconographic Workshops sponsored by Kent Reilly, initially at the University of Texas (Austin) and later at Texas State University (San Marcos). As James Vernon Knight, Jr. (2012:162) has clearly expressed:

> *By assembling the largest possible corpus and organizing it by genre as a database, legitimate inferences can be drawn concerning stylistic conventions and*

> *conventional organizations of subject matter…. This assembly may be difficult, expensive, and time consuming, as the subject materials typically reside in numerous dispersed collections, access to the originals may be limited, and available published images typically are not in the same format.*

While building on the foundational studies of triskeles of William Henry Holmes (1883), Madeline Kneberg (1959), Jon Muller (1966, 1989), and particularly that of Jeffrey Brain and Philip Phillips (1996), a key difference has been a systematic long-term effort to construct a much larger and more comprehensive corpus of triskele gorgets, along with expanding contextual information. After reviewing the significant prior published research on triskeles, I employ a variety of modern typological and stylistic approaches to the larger corpus to propose some more refined understandings of their distribution, chronology, and groupings (see Smith and Beahm 2008, 2010). Following those propositions, I suggest that the developmental sequence of the triskele begins in Middle Tennessee and then expands to East Tennessee where it ultimately is reinterpreted and becomes the "rattlesnake gorget" sequence of the Southern Appalachians. Finally, I offer some propositions about the potential cosmological referents of these gorgets drawing upon indigenous folklore.

Previous Triskele Research

William Henry Holmes (1883) placed these gorgets in his *Scalloped Disk* category, one of only seven broad content groups that he perceived. The type specimen for this group was from John Wesley Powell's 1877 excavations at the "Walnut Mound" in Nashville (Figure 1; also known as Bosley Farm/Bowling Farm site; 40DV426; Moore and Smith 2009). I can hardly improve on Holmes' detailed description, so it is included in its entirety following:

> *The various concentric circles are drawn with geometric accuracy around a minute shallow pit as a center. These circles divide the surface into five parts - a small circle at the center surrounded by four zones of unequal width. The central circle is three-eighths of an inch in diameter, and is surrounded by a zone one-half an inch in width, which contains a rosette of three involuted lines; these begin on the circumference of the inner circle in three small equidistant perforations, and sweep outward to the second circle, making upwards of half a revolution. These lines are somewhat wider and more deeply engraved than the other lines of the design. In many specimens they are so deeply cut in the middle part of the curve as to penetrate the disk, producing crescent-shaped perforations. The second zone is one-fourth of an inch in width, and in this, as in all other specimens, is quite plain. The third zone is one-half an inch in width and exhibits some very interesting features. Placed at almost equal intervals we find six circular figures, each of which incloses a circlet and a small central pit; the spaces between the circular figures are thickly dotted with minute conical pits, somewhat irregularly placed; the number of dots in each space varies from thirty-six to forty, which gives a total of about two hundred and thirty.*
>
> *The outer zone is subdivided into thirteen compartments, in each of which a nearly circular figure or boss has been carved, the outer edges of which form the scalloped outline of the gorget. Two medium sized perforations for suspension have been made near the inner margin of one of the bosses next the dotted zone; these show slight indications of abrasion by the cord of suspension. These perforations, as well as the three near the center, have been bored mainly from the convex side of the disk* (Holmes 1883:274-275).

FIGURE 1. Type specimen for Holmes' *Scalloped Disk* category (NMNH A32060; *Kevin E. Smith).*

In 1883, his corpus of triskeles was relatively limited – but he discerned some of the most important and still relevant parts of the design fields more explicitly defined herein.

In Tennessee, the pioneering work of Madeline Kneberg (1959) on shell gorgets from the eastern part of the state established the earliest significant regional sequence of these objects – a series that has generally withstood the test of time, although now more temporally refined by the advent of radiocarbon dating (Sullivan 2007). The lasting success of Kneberg's work was facilitated by the extensive database of East Tennessee shell gorgets created during the relatively well-documented excavations of the Works Progress Administration and Tennessee Valley Authority in the 1930s and 1940s (Hally 2007). In her definition of the *Scalloped Triskele*, Kneberg focused on three significant design fields containing distinctive motifs: a) the triskele; b) a medial band consisting of concentric circles and dots; and c) the scalloped margin. Kneberg noted several other characteristics she deemed significant based on the small sample available to her in 1959: 1) the scalloped margin is almost never associated with any design element other than the triskele; 2) the triskele arms are usually curved counterclockwise... but sometimes clockwise;[1] 3) the circles which

form the outer margin often appear in low relief because of the routed out triangular spaces between them; 4) the number of concentric circles in the dotted border varies from four to eight, six being most frequent; 5) they were never associated with male burials (eight were with young or mature female burials and the others with infants); and 6) in its typical scalloped form it seems to be later than the turkey cock, eagle dancer and spider. Her interpretations and conclusions were based on a very limited sample of what I consider to be triskele gorgets at the very end of the production and deposition of that genre.

Beginning with his dissertation research, Jon Muller examined what he initially called the "Nashville Tentative Style" and later the “Nashville Scalloped Triskele” (Muller 1966:180-182, 1989:22). He noted a considerable time span for the triskele theme (beginning mid-thirteenth century) with a period of "most common use" in the fourteenth and fifteenth centuries (Muller 1989:22-23). He further suggested "that the widespread distribution of the Nashville theme gorgets reflects a mechanism of exchange different from those present during the Southern Cult proper" (Muller 1989:23).

Jeffrey Brain and Phil Phillips (1996:113) defined eleven groups of “gorget styles,” including three styles of “Triskele”: Nashville I, Nashville II, and Springs. They examined this genre of objects using a mix of stylistic and typological approaches:

> [In the triskele genre]*, we recognize three closely related styles, all of which share a circular structure composed of a central whorl, a circular ophidian band of concentric circles and pitted panels, and an outer border that is usually scalloped. Small variations in the design elements and technology distinguish the styles. Although the central whorl is almost always a triskele, and hence we have adopted the prevailing nomenclature, there are few instances where it is a tetraskelion - or swastika -- and even one where there are only two volutes. Nevertheless, the stylistic connections are abundantly clear and the variation might be attributed to individual vagary.*
>
> *All the gorgets are circular, of course, which is consistent with the overall design structure. Decoration is usually on the concave side, but in a few cases it is on the convex side -- demonstrating a relationship with the Cox Mound style bird gorgets, with which the triskeles are often associated. There is also a general morphological similarity to the scalloped stone palettes, such as have been found at Etowah and Moundville, but no direct association has been established between the two types of artifacts. On the other hand, copper homologs of Nashville style gorgets as well as scalloped stone palettes were found in Mound C at Moundville.*

Here, I apply a variety of typological and stylistic approaches to examine a significantly larger corpus of these objects. I follow Muller’s suggestion that “there is no right or wrong way to define types, merely useful and useless ways of doing so” (Muller 2007:17). While some of the resulting interpretations build upon, correlate with, and corroborate earlier examinations, I have also attempted to integrate a more refined modern understanding of regional chronologies and Southeastern iconography with the existing “themes/genres,” “types,” “styles” and spatial distribution data.

What is a *triskelion* (often abbreviated in the archaeological literature as *triskele*)? As defined by Schwartzman (1996:229): "*Triskelion (noun)… skelos “leg” – In ancient Greece, a triskelion was a design*

consisting of three bent legs radiating from a common center… It is used as an example of a configuration possessing three-way rotational symmetry but no other common type of symmetry such as bilateral or point symmetry." Although the Mississippian triskelion motif perhaps has little to do with the notion of legs, I retain use of the term since it is thoroughly embedded in the modern literature. Structurally, however, I note that the Mississippian *triskele* is actually a circle divided into three spiraling or swirling parts exhibiting three-way rotational symmetry. As noted previously, two mirror-image variants of this motif are noted based on the "direction" of rotation (Figure 2; see also Note 1).[2]

The Corpus and Style

My preliminary examination began with images of over 400 marine shell gorgets exhibiting some sort of central "swirl" motif, ranging from as few as two to as many as eight divisions of the circle. While there may be some very broadly understood "Mississippian meaning" underlying this diversity of swirl motifs (for example, see discussion in Lankford 2011), their wide geographic distribution and the range of variability in motifs and design fields are extraordinarily complex. The majority of prior studies have generally agreed on three defining components that are almost always present: a central "swirl" motif; a medial band consisting of circular elements interspersed with dotted areas; and a border consisting of rounded to oval "scallops." My initial sorting suggested that the only coherent grouping was a corpus of 104 gorgets exhibiting a true tripartite "triskele" at the center, and an additional fourteen gorgets that are essentially identical in the other design fields and motifs but exhibit a substitution for the triskele.[3] As my primary research interests focus on the Cumberland River valley, I also note that the triskele and the ophidian band are not represented in any medium except shell gorgets in the Middle Cumberland Region (MCR).

FIGURE 2. Triskele motif in two rotational variants: Left) counterclockwise; Right) clockwise (*sensu* Kneberg 1959; *Kevin E. Smith).*

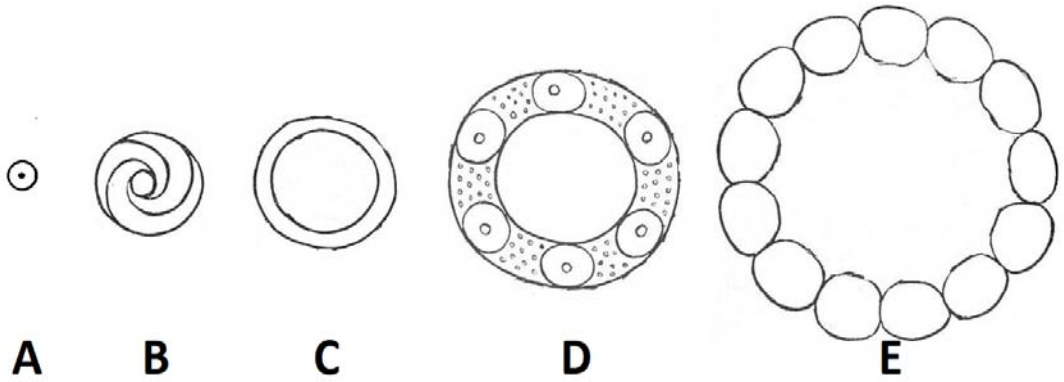

FIGURE 3. Five design field for analysis (examples are the most common configuration): a) center motif; b) rotational motif; c) plain band; d) pitted band with interspersed circular elements (aka *ophidian band*); e) scalloped border.

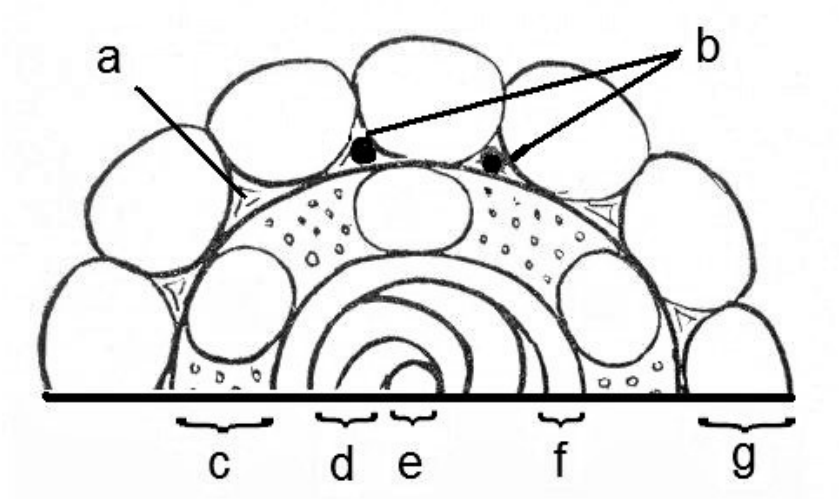

FIGURE 4. Structural elements referred to in the text: a) spandrel; b) suspension holes; c) ophidian band (consisting of alternating circular/oval elements and pitted areas); d) center rotational motif; e) center circle; f) center border (between rotational motif and ophidian band); g) scalloped border.

Design Fields and Structure

The most intricate of the triskele gorgets contain five nested fields arranged as concentric circular elements (Figure 3). Beginning at the center and moving outward, these fields include: A) a center circle; B) the swirl motif; C) a plain band; D) a band containing alternating circular elements and pitted areas (aka *ophidian band*); and E) the scalloped border. My analysis shows a very strong correlation between the triskele and the ophidian band (n-95). In other words, if the triskele is present, the ophidian band is virtually always present – the exceptions appear to be chronologically earlier. Another structural element of relevance is the "spandrel" – the space separating the ophidian band and the scalloped border – and the placement of the suspension holes relative to the spandrels (Figure 4).

It is worth noting that very few of the gorgets exhibit overall rotational symmetry between the design fields, which would require multiples of three or four in the ophidian band and scalloped border for central triskeles and swirl crosses, respectively. In other words, the intent was apparently not overall rotational symmetry between the key design fields. I suggest that the number of circles in the ophidian band (Field D) *is* potentially significant for reasons other than simply symmetry, but that the number of scallops in the outer field (Field E) is not related to the other fields and appears to be more dependent on the symmetry of presentation.

Field 1: Center Circle (n=90; Figure 5). Excluding those gorgets where the central area is damaged (n=7), the central circular field is clearly present on the majority (n=90) and clearly absent only on seven, suggesting that inclusion of this element was deemed thematically important by virtually all artisans. Four variants of Field 1 are present in the sample, although the vast majority are the dot-in-circle (hereinafter referred to as a *circumpunct*).

Field 2: Swirl Motif (n=104; see Figure 2). Since the triskele was the defining motif for final sample selection, all the gorgets in my primary corpus exhibit the central triskele. In all cases, the triskele is defined by engraving, but in a minority of cases (n=20), the engraved designed is accentuated by fenestration.[4] Five additional examples have three drilled holes at the beginning of the "arms" of the triskele (see Figure 1), suggesting that fenestration was a post-engraving addition to the gorgets. On other fully fenestrated gorgets, these "pilot holes" can frequently still be discerned from the reverse. From a production perspective, it is of interest to note that on all examples observed in person, the pilot holes are skillfully drilled from the reverse of the gorget. Then a saw-like tool was used to cut and abrade the remainder of the fenestration. Although I discovered this independently, I ruefully noted later that W.H. Holmes clearly observed this: "These perforations, as well as the three near the center, have been bored mainly from the convex side of the disk" (Holmes 1883:275).

Field 3: Plain Band (n=64). Although present on over half the gorgets in my corpus, Field 3 is the most likely of the five fields to be omitted in its entirely. On one of the "Springs style gorgets" from Mound 1, the field is substituted with a rayed circle, while on the other Springs gorget, the rayed circle is added as a "supplementary" field (and substituted again for field 5 on

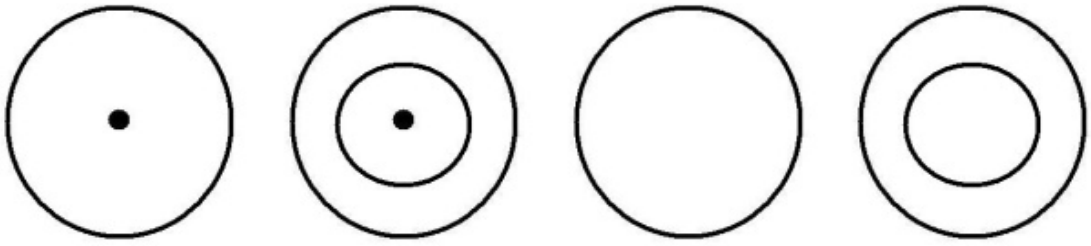

FIGURE 5. Variants of center circle (Left to right: most common to least common): 1) circumpunct (dot-in-circle); 2) circumpunct in circle(s); 3) circle only; 4) concentric circles only.

FIGURE 6. Two "Springs Styles" gorgets from Mound 1, Castalian Springs Mounds, Sumner County, Tennessee (*Photographs by Steven Cooper*).

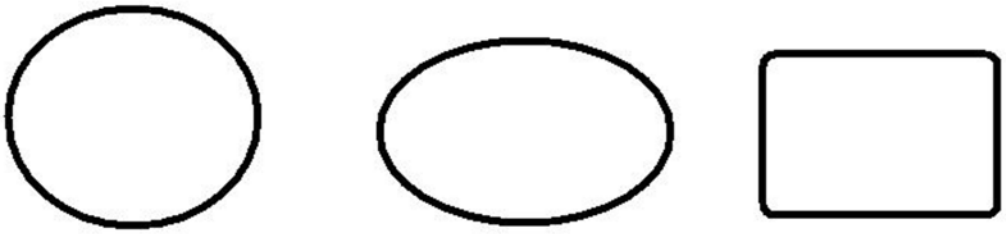

FIGURE 7. Idealized forms of scallops: 1) round to slightly oval; 2) rounded loaf shape; 3) rectangular loaf shape.

the same gorget). These two gorgets (Figure 6) are important to my understanding of the overall design structure, as I suspect that the excised spandrels on most of the other gorgets are an intentional but, to my eyes, a more "covert" way to depict the rayed circle (for example, see Figure 1).

Field 4: Ophidian Band (n=98). Field 4 consists of circles, usually a circumpunct (see Figure 3D and Figure 5), alternating with panels filled by numerous lightly drilled pits (dots). That this field is tightly linked with the triskele is evidenced by the fact that 98 of the 104 triskeles exhibit both features and the ophidian band is represented on only 14 gorgets without a centering triskele.

Field 5: Scalloped Border (n=89). The scalloped border consists of a band of generally symmetrically placed elements ranging from circles, to rounded loaf shapes, to rectangular loaf shapes (Figure 7). The number of elements appears to the author to reflect nothing more than the creator's attempt to produce a balanced and symmetrical border. The scalloped border is equally tightly linked with the triskele and the ophidian band in my corpus with only five triskeles lacking the scalloped border. An element intimately linked with the scalloped border is the inner boundary with Field 4 – a rayed circle created by the demarcation of the spandrels. That this "rayed circle" is more than simply coincidence is highlighted by

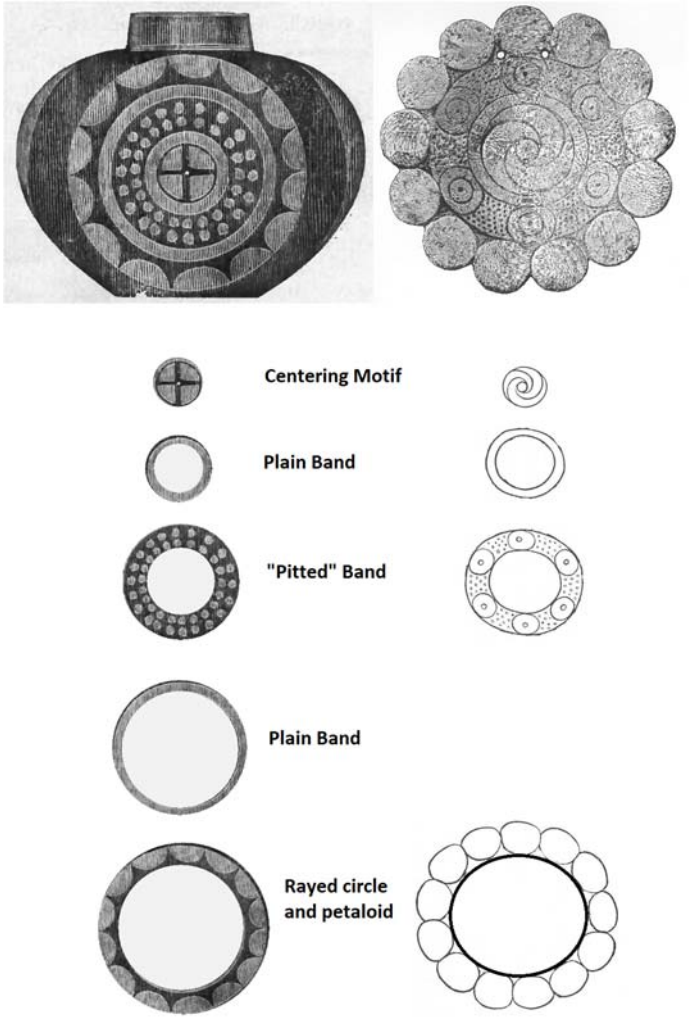

FIGURE 8. Comparison of nested design motifs on negative-painted bottle from DeGraffenreid (40WM4; Jones 1901) and triskele from the Bosley site (40DV426; Holmes 1883).

two of the triskeles from Mound 1 at Castalian Springs – both of which much more emphatically illustrate the motif (see Figure 6).

This constellation of fields and corresponding motifs comprises the core set of motifs defining the "classic triskele," with departures from this coherent design representing triskeles created both early and late in the sequence (and the related geographically disparate regions of creation).

Visual Themes, Motifs, and Groupings

I begin with the observation that the triskele-theme gorgets are firmly grounded in a broader Middle Cumberland Style region that includes an emphasis on incising, engraving, and pitting on shell and ceramics; and the use of "negative space" to define motifs as in negative-painted

ceramics, excision on pottery and shell, and fenestration on shell. The use of negative space also extends to textiles which included openwork (Drooker 1992:190-192, Figures 52-53) and almost certainly the application of negative painted designs (Sharp 2019; Sharp et al. 2011), although the evidence is rarely preserved archaeologically. The Middle Cumberland Style also emphatically focuses on nested motifs, usually circular and concentric in nature (Figure 8).

At this stage in my analysis, I am reluctant to attempt to define "styles" within the overall triskele genre (*sensu* Knight 2012). Instead, I have elected to divide the current corpus into more conservative "Groups" (admitting that some of them may well have the core of what might eventually be defined as part of a regionally situated "style"). Figure 9 illustrates representative examples of each of the defined groups.

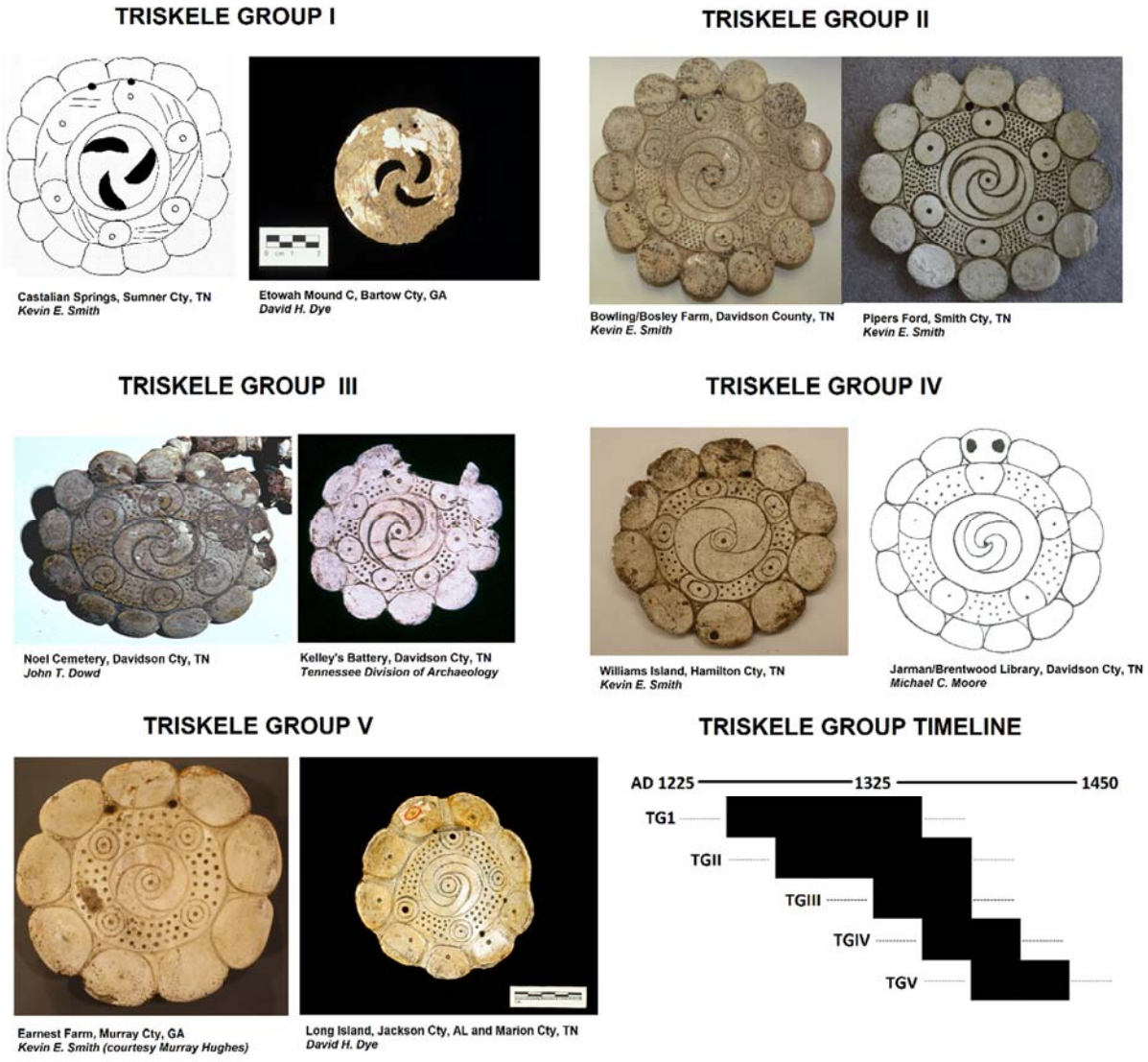

FIGURE 9. Triskele Groups and Timeline.

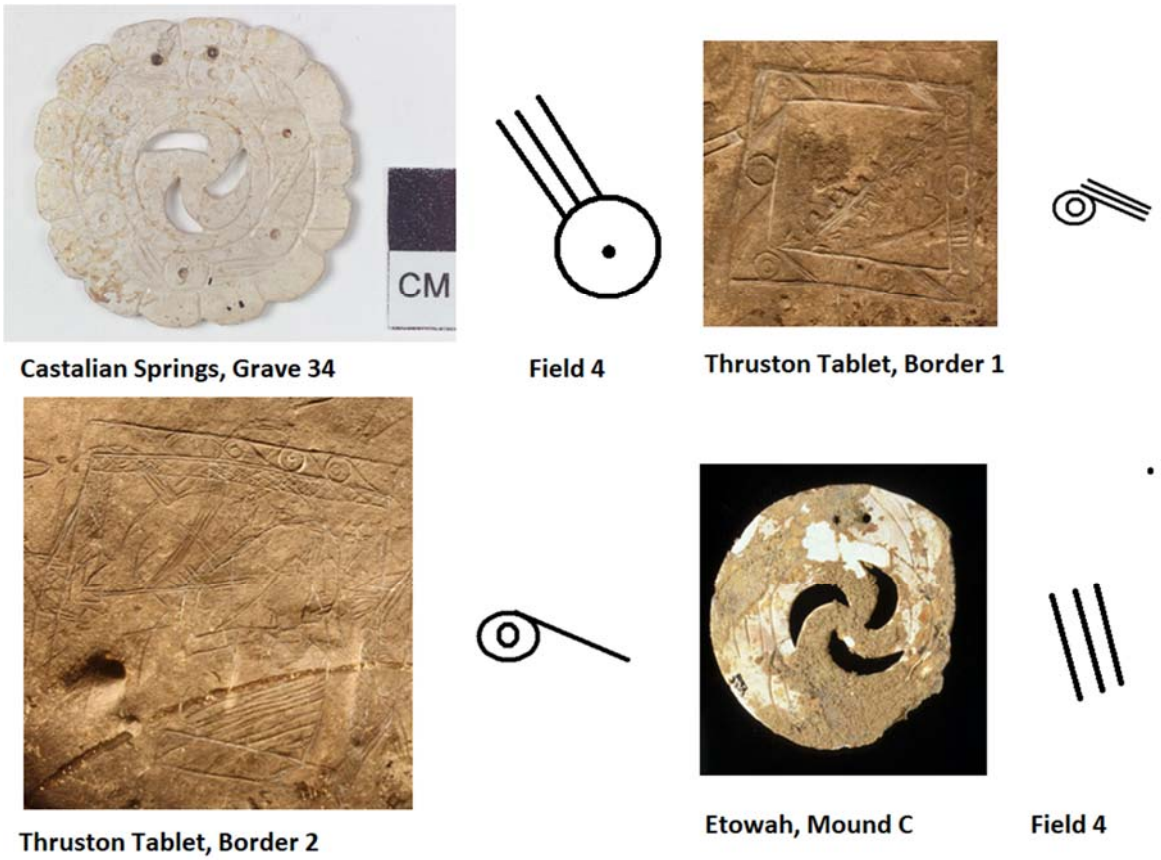

FIGURE 10. Comparison of border features on two Triskele Group I gorgets and the Thruston Tablet.

Triskele Group I (TG-I). Triskele Group I represents what I currently believe to be the earliest chronological set of triskeles, the majority of which are from Mound 1 and other stone-box cemeteries at the Castalian Springs site in Sumner County. The group is anchored by the occurrence of two eclectic triskeles in Grave 34 accompanied by an Eddyville gorget and two Cox gorgets. An additional seven triskeles were recovered in the four "tiers" of stone-box graves above Grave 34 in Mound 1 – all of which are also somewhat eclectic examples of the genre.[5] The Eddyville gorget is firmly placed within the Classic Braden style (AD 1200-1275; Brown 1989). With over 50 radiocarbon dates from the Castalian Springs site, I am confident in bracketing the graves in Mound 1 to AD (1225) 1250-1325 (1350). One feature shared by eight of the Castalian Springs triskeles is the relatively large and broad fenestration in a distinctive "crescent moon" shape (see Figure 6).

The remaining gorget assigned to this group, also exhibiting the "crescent moon" fenestration, is from an Early Wilbanks phase stone-box burial (ca. AD 1250-1325) in Mound C, Etowah, Georgia (Figure 10). Given the absence of other triskeles at Etowah and its strong stylistic similarities with the Castalian Springs triskeles, I

suspect it may have been manufactured at Castalian Springs as well. The Etowah and one Castalian Springs triskele have elements in the "ophidian band" that are similar to regionally distinctive borders on the Thruston Tablet from at or near Castalian Springs, adding another indirect assertion of priority (Figure 10; see also Steponaitis et al. 2011).

Another gorget related to this group is from the floor of House 1 at the South Cape site (23CG8) in southeast Missouri. Tamira Brennan Christensen (2010) places the structure as likely to date to the early-to-mid 1300s. A second gorget from the Towosahgy site (aka Beckwith's Fort) in Missouri is nearly identical if the replica I have seen is indeed accurate. At any rate, the two southeast Missouri gorgets are in a distinctly different style from the others but constitute some additional evidence for an early horizon of heavily fenestrated triskeles.

Triskele Group II (TG-II). Although a significant portion of this group includes many of the "Nashville I style" gorgets of Brain and Phillips (1996), my sorting criteria was somewhat different and also incorporates several gorgets included in their "Nashville II style" gorgets. My defining characteristic for this group is the presence of *all five design fields* as previously described, regardless of the perceived skill of execution. The result is a relatively large grouping with a broad geographic distribution, but it is coherent in the sense that all the creators of these gorgets were clearly aware of the significant interrelationships of the five design fields. While the majority of the gorgets derive from several workshops in the Cumberland River valley, several of these gorgets – essentially identical to many discovered in Davidson County sites -- were recovered from sites in the southern Appalachians of southeast Tennessee and north Georgia. Rather than citing the specter of "trade" or "exchange," I suggest that this distribution represents the migration of a significant population (one or more towns?) from the Middle Cumberland Region to southeast Tennessee beginning in the mid-1200s and continuing for about a century. From my perspective, TGII gorgets either moved *with* people rather than *between* people or, alternatively, the migrants included one or more artisans from TGII workshops. While modern archaeological data is lacking, the most likely location for one of these relocated towns (or potentially a new coalescent community) is Williams Island in Hamilton County (see, for example, gorgets in the Wesleyan collection from Williams Island (MacCurdy 1917a). While less firmly bracketed in time, the current seriation of dates from sites producing triskeles suggests production, use, and deposition around (1250) 1275-1350 (1375).

Triskele Group III (TG-III). This grouping includes a small set of gorgets that conform with the definition of TG-II but omitting Field 3 (the plain band separating the triskele and ophidian band). With some overlap, these gorgets appear to date slightly later [(1300) 1325-1375 (1400)] than those in TG-II. Although the creators still demonstrate an awareness of the overall design structure of TG-II, I offer the possibility that they represent a significant transition in the "community of practice" that eventually results in the reinterpretation of the design fields, largely by artisans working in both the MCR and the southern Appalachians, ultimately creating what I argue are the latest two triskele groups.

Triskele Group IV (TG-IV). While one of the six gorgets in this group could be comfortably assigned to TG-II and the other five to TG-III, the presence of only

five circular elements in the ophidian band is my criteria for pulling these out. Although the group is small (n=6), they are relatively tightly clustered at sites in Hamilton County with a single outlier downriver in Mason County, Alabama (Figure 11). The dates of production and deposition of this group [(1325) 1350-1400 (1425)] are less securely anchored than the early end of the triskele genre and based largely on the presumption that the reduction of circular elements in the ophidian band (first to five and then to four) begins after the design fields are reinterpreted within the context of the southern Appalachians.

Triskele Group V (TG-V). While all of these gorgets could be comfortably assigned to TG-III, the presence of only four circular elements in the ophidian band is my sorting criteria for pulling these out. Again, they are relatively tightly clustered in southeast Tennessee, with singular outliers in Jefferson County and Sumner County (Figure 12).[6] TG-V also represents a chronological placement [(1350) 1375-1425 (1450)] based on final transformation of the triskele genre to a cruciform design structure in the ophidian band at the terminal end of their production – prior to reformulation as the beginnings of the "rattlesnake genre."

In sum, this sequence of triskele groups begins with the first appearance of an identifiable triskele motif in the mid-late

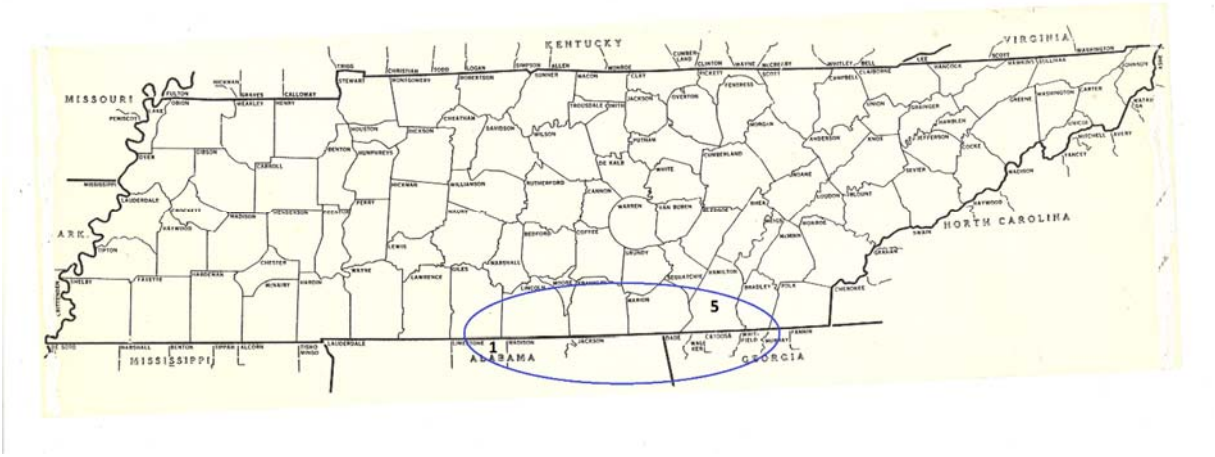

FIGURE 11. Distribution of Triskelion Group IV.

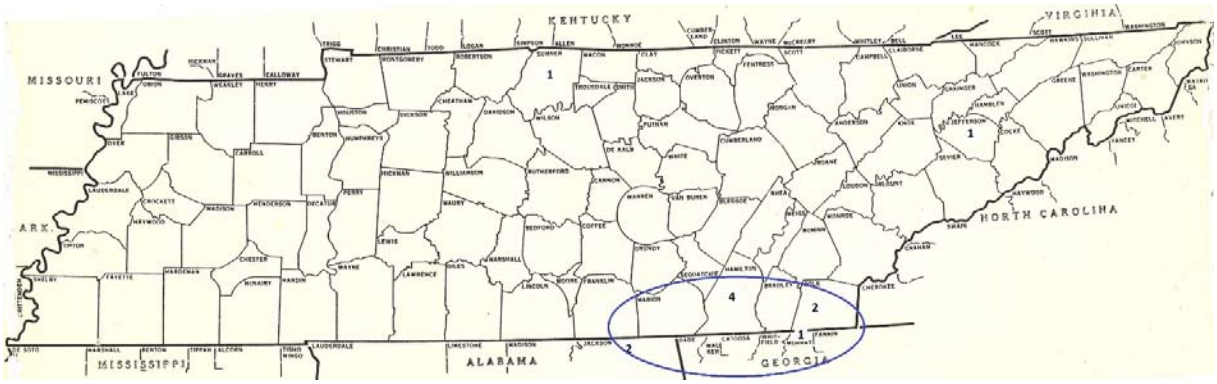

FIGURE 12. Distribution of Triskelion Group V.

thirteenth century – nearly as "stand alone" as the simple annular and cruciform gorgets. The canonical version (TG-II) then appears in the MCR during the "period of most common use" of triskeles (Muller 1989). The coherence of the overall design structure of the "classic triskeles" (TG-II) then begins to fall apart with the abandonment of the plain band (TG-III), the reduction of the circular elements in the ophidian band to five (TG-IV), and finally the transformation of the ophidian band into a cruciform design element (TG-V).

Anchoring the Chronology

Where contextual information exists, triskelion gorgets are recovered almost exclusively from mortuary contexts. As a result, directly associated radiocarbon dates are largely non-existent. The chronological framework presented for Groups I-V (see Figure 9) was constructed using two general lines of evidence – 1) confidently established occupation spans for archaeological sites producing triskeles; and 2) better-known chronological spans for associated diagnostic artifacts (such as ceramic vessels). As discussed previously, the chronological framework for the groups should be considered as an "idealized" interpretation using the evidence currently available.

Unlike most Mississippian graves in the MCR, which are distributed horizontally in cemeteries, two sites in East Tennessee containing triskeles and variants provide some additional stratigraphic evidence – Hixon and Dallas. At Hixon, the earliest example (ca. 1300/1325) is a fairly typical Type II triskele (Figure 13, lower), except that the scalloped border has been substituted by the local South Appalachian plain border. In the later example (ca. 1350), the triskele has been replaced with

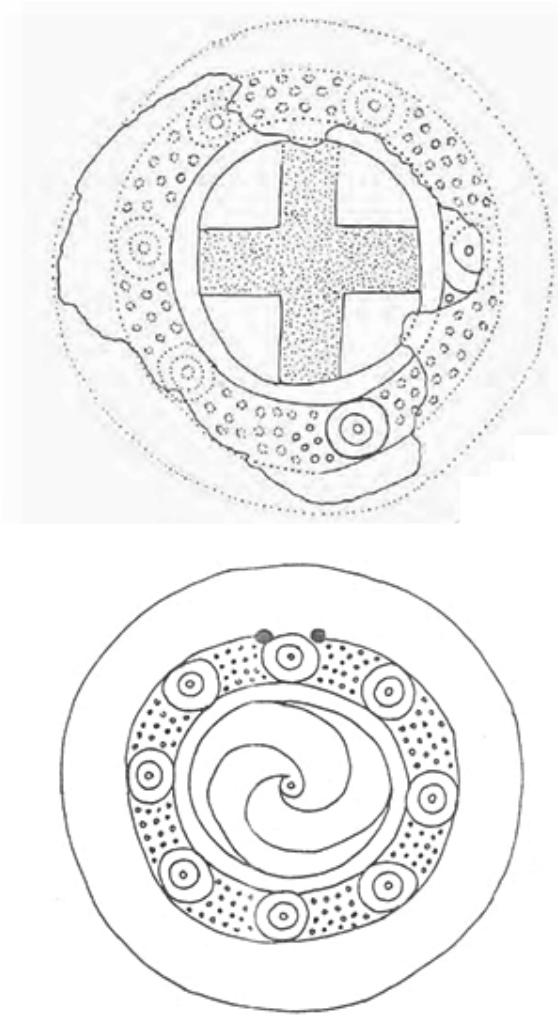

FIGURE 13. Two marine shell gorgets from the Hixon site, Hamilton County, Tennessee (presented in stratigraphic order; Kneberg 1959).

an equal-arm cross (Figure 13, upper). At Dallas, three relevant gorgets provide an additional stratigraphic sequence. The earliest example (ca. AD 1350) is a fairly standard Type II triskele (although having seven circumpuncts in the ophidian band (Figure 14, lower). The second example (ca. AD 1410) is one of the small number of Type IV triskeles (Figure 14, center). The latest of the gorgets (ca. AD 1450) is a Type V triskele where the ophidian band has essentially been translated as a

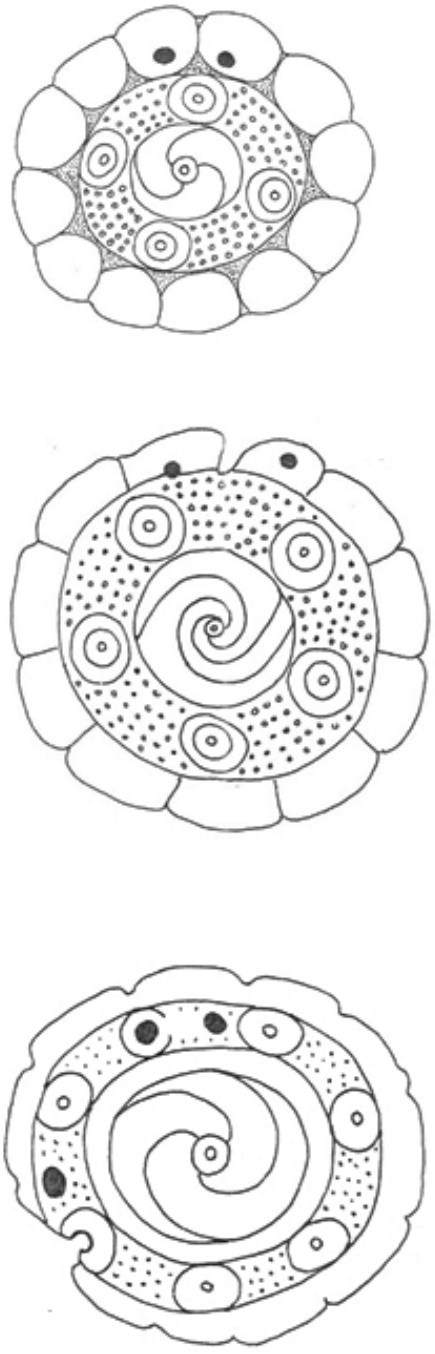

FIGURE 14. Three marine shell gorgets from the Dallas site, Hamilton County, Tennessee (presented in stratigraphic order; Kneberg 1959).

cruciform (Figure 14, upper). The stratigraphic and radiocarbon data for these two sites provide some key data for anchoring the proposed sequence of groups (Kneberg 1959; Sullivan 2001).

In many past interpretations of the distribution of triskele theme gorgets, an underlying assumption of production and exchange of wealth items was used – engaging notions of trickle-down trade and prestige display. As noted by David Hally (2007:185): "relatively little research has focused on… the mechanisms by which [gorgets] were moved across large distances." In light of new paradigms and models engaging both the inalienable nature of certain kinds of shell gorgets and increasing acceptance that long-distance migration did happen in the Mississippian past (and probably even more frequently than currently accepted), I interpret the sequence of triskeles and their changing distribution as evidence of a process engaging the migration of significant populations from the emptying Middle Cumberland Region to East Tennessee between AD 1300 and 1450 – but also a continuing process of communication between "those who left" and "those who stayed behind." Finally, I perceive the process of "change" exhibited in the proposed chronological sequence of groups as evidence of not only an on-going process of interaction, but also of the transformation and reinterpretation of the Type II triskeles as part of the process of "hybridity" (*sensu* Alt 2018; King and Sawyer 2017). This transformation in East Tennessee is not a new notion, as Brain and Phillips (1996:117) noted: "we still believe that the qualitative differences [between Nashville I and Nashville II] are not simply a matter of competency within a style, but rather reflect an imitative extension of the style beyond the Nashville region – specifically transplantation in

eastern Tennessee and contiguous regions." Here, however, I explicitly add that the objects were not moving through a trade network as wealth items, but were moving with the people that owned the rights to wear them. Ultimately, as emigrants were incorporated into and helped create new communities in the upper Tennessee River valley and the visible populations of Middle Tennessee declined, the triskele motif – a uniquely Middle Cumberland Region trademark – lost cogency. The ophidian band – once a pattern largely of sixes and eights – was transformed into a more broadly understood cruciform pattern of four. Ultimately, I suggest the end result was the transformation of the triskele into an equally long sequence of "rattlesnake" gorgets at about AD 1400 (Crawford 2013; King et al. 2018).

Segue into the Lick Creek Rattlesnake Gorgets

Over a century ago, Grant MacCurdy (1917b:60) argued for a "genetic relationship between the realistic rattlesnake shell gorgets and the so-called 'scalloped shell discs' of Holmes. The latter are simply conventionalized representations of the rattlesnake and should therefore be considered a variety of the rattlesnake gorget." His argument goes as follows: "the dotted circle in the center is the eye; the whorl of three incised lines leading from the central circle takes the place either of the neck and two jaws or the three elongate perforations that sometimes occur above the upper jaw, in the mouth, and below the lower jaw respectively... Then comes a broad band representing the snake's body, with its dotted circles alternating with punctate areas - the latter are generally cross-hatched in the other type of rattlesnake gorget" (MacCurdy 1917a:80). Muller explicitly rejected this suggestion of a developmental relationship and implicitly the herpetomorphic connection: "it is interesting to note that it has been suggested at one point that the 'scalloped triskele' gorgets developed out of the rattlesnake gorgets. In fact as Kneberg (1959: Chart 1) has shown, the scalloped triskele gorgets are earlier. There appears to be no reason to postulate any connection between these two themes" (Muller 1966:36). I suggest that both interpretations are partially correct in the sense that: a) the triskele *is* earlier than the rattlesnakes, but, b) there is a developmental relationship between the triskele genre and rattlesnake genre gorgets.

Toqua Burial 241, which dates to about A.D. 1410, contains a key set of eleven marine shell gorgets apparently worn as a single necklace on the interred: a) a large spider gorget; and b) ten smaller Lick Creek rattlesnake gorgets (five with heads facing left and five facing right). The spider gorget exhibits a unique mix of Cumberland and southern Appalachian motifs – the most striking being a standard Cumberland ophidian band with eight circumpuncts:

(https://mcclungmuseum.utk.edu/wp-content/uploads/sites/78/2013/03/EXHIBITS_NativePeoplesSpiderGorget.jpg).

In comparison to the triskeles, the center field has been replaced with nested diamonds and the triskele has been replaced with a typical "head up" Appalachian spider (as opposed to the typical "head down" spiders of the Eddyville style; see Esarey 1986). The plain band of the triskele is retained along with the ophidian band, but the scalloped border is replaced by the plain band border typical of southern Appalachian gorgets. In sum, I argue that this gorget was made by

a southern Appalachian artisan – but one intimately familiar with the triskele as well.

Of equal interest is the combination with ten Lick Creek gorgets – probably among the earliest production of the rattlesnake gorget genre (Crawford 2013). Here, I suggest that the "triskele" motif has been separated from the ophidian band and depicted as a rattlesnake. As suggested by Grant MacCurdy (1917a:80), the structure of the rattlesnake gorgets reveals a triskele-like tripartite rattlesnake – with the two jaws and the head/neck now forming the "swirling" triskele (Figure 15; Crawford 2013; King et al. 2018).

Iconographic Interpretations, Cosmological Analogs and Sacred Narratives

The elements of the triskele-theme gorgets are so conventionalized as to almost defy meaningful analysis (or alternatively, to encourage a plethora of Rorschach-like interpretations). As William Henry Holmes (1883:274-275) so aptly noted:

> *Whatever may be the meaning of this design* [triskele]*, we cannot fail to recognize the important fact that it is significant - that an idea is expressed. Were the design ornamental, we should expect variation in the parts of details of different specimens resulting from difference of taste in the designers; if simply copied from an original example for sale or trade to the inhabitants we might expect a certain number of exact reproductions; but in such a case, when variations did occur, they would hardly be found to follow uniform or fixed lines; there would also be variation in the relations of the parts of the conception as well as in the number of particular parts; the zones would not follow each other in exactly the same order; particular figures would not be confined to particular zones; the rays of the volute would not always have a sinistral turn, or the form of the tablet be always circular and scalloped. It cannot be supposed that of the whole number of these objects at one time in use, more than a small number have been rescued from decay, and these have been obtained from widely scattered localities and doubtless*

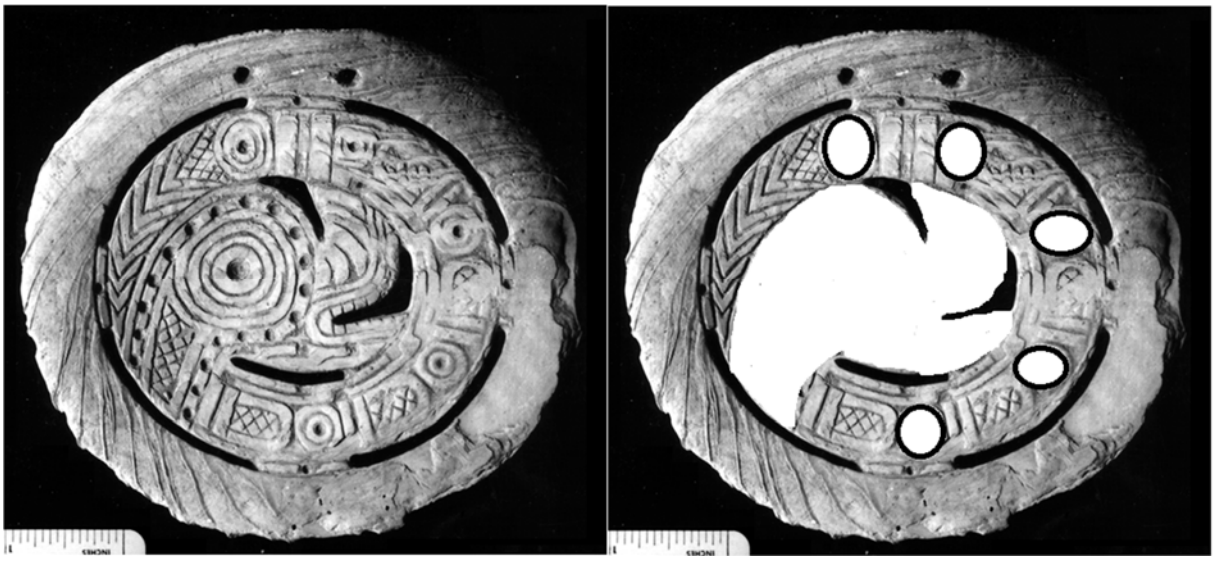

FIGURE 15. Brakebill style "herpetomorphic gorget" showing triskele-like pattern (base image © Jon D. Muller, used by permission).

FIGURE 16. Crested birds on Cox gorget and mussel shell "spoon" (*Kevin E. Smith*; Gates P. Thruston Collection; Tennessee State Museum 696).

represent centuries of time, yet no variants appear to indicate a leading up to or a divergence from the one particular type. A design of purely ornamental character, even if executed by the same hand, could not, in the nature of things, exhibit the uniformity in variation here shown. Fancy, unfettered by ideas of a fixed nature, such as those pertaining to religious or sociologic customs, would vary with the locality, the day, the year, or the life..

Holmes was an astute observer and recorder of details. While unable (or unwilling) to venture speculations on the meaning of the design, he recognized that is was not simply ornamental, not simply copied or imitated, but rather that the design held some great significance to the creators and users.

Dotted Center Circles and Ophidian Band

Recognizing, as did Holmes, that many alternative explanations remain plausible, I offer what I believe to be the most likely interpretation as a specific constellation (with associated narrative). Beginning at the center with the circles, circumpuncts, and dotted concentric circles of Fields 1 and 4 (which are very tightly linked), Phillips and Brown (1978:150) notes that "the great majority of dotted circles are deployed in large numbers of snakes, felines, and bird tails, in that order…. The case of dotted concentric circles is different… they are either body markings on snakes or felines (Phillips and Brown 1978, Volume 1, pg. 150).

In the Middle Cumberland Region, serpents, birds (except for owls), and felines are usually not depicted in whole body form either in two or three dimensions. Felines are entirely absent, and birds are limited to the crested heads of the Cox gorgets and mussel shell spoons (which display circumpunct eyes; Figure 16), owl effigy bottles, or the heads of relatively naturalistic waterfowl and owls as adornos on bowls. Only two clear examples of serpents are known – a (poorly preserved) coiled serpent of "walnut" coated with copper from Mound 1

FIGURE 17. Coiled ceramic serpent exhibiting circumpunct-in-circle pattern (*Kevin E. Smith*; Gates P. Thruston Collection; Tennessee State Museum 795).

at Castalian Springs and a coiled ceramic serpent in the Thruston collection, which unfortunately has no provenience given. Since the latter does lend some useful insights into circumpuncts and snakes, I illustrate it with the caveat that while unprovenienced, such objects in Thruston's collection almost all seem to derive from the vicinity of Nashville, Tennessee (Figure 17).

Hence, the preponderance of the evidence suggests that the center circle and "ophidian band" of the triskeles is related to serpents (in fact, the "ophidian" of the common term for Field 4 means "relating to or denoting snakes"). From an iconographic perspective, George Lankford (2007b:109) has suggested that many of these serpent depictions relate to the "Path of Souls" (what we know today as the Milky Way): "the basic argument is threefold: 1) the Great Serpent was a universally known figure in the Eastern Woodlands for many centuries, despite its many forms; 2) the Great Serpent was located not only in the water world, but also

FIGURE 18. Negative-painted "dog" bottle from the Bosley site, Davidson County, Tennessee (*Kevin E. Smith*; Gates P. Thruston Collection; Tennessee State Museum).

in the celestial realm; and 3) the Great Serpent appears not only in myth, but also in graphic designs, both prehistoric and historic." David H. Dye (2009) has further argued that he so-called "Dog Pots" of the Mississippian Southeast are but one manifestation of this pan-Eastern concept. Some of the finest negative-painted "dog pots" are from the Nashville area – and those are all marked with circumpuncts in circles (Figure 18). So, while the evidence is not as compelling as might be preferred, I am comfortable suggesting that the circumpuncts and the triskele are conceptually linked to the broader concept of "The Great Serpent" – and particularly that of the Path of Souls visible as the Milky Way in the celestial sphere at night. Elsewhere, Lankford (2011:232) leaves us with the tantalizing suggestion that "the circle-dot, for example, may be a star symbol, but that is a project beyond the

limits of this chapter." I will return to that suggestion as my argument proceeds

Triskelion

For the triskelion motif itself, George Lankford (2011:237) notes that "In the Cumberland region, the emphasized symbol was a triskele, which has been treated here as a regional style variant of the swirl-cross, with three arms instead of four… the result is an identification of the swirl-cross as a symbol for the Beneath World, water, and the Underwater Serpent." While I agree that there is probably a broad conceptual relationship between the swirl cross (tetraskelion) and the triskele, the former is clearly a minority substitution on shell gorgets – and for the most part, appears to occur outside the "community of practice" or very late in the triskelion sequence. Two of the tetraskelions are from widely distributed sites in western Arkansas – both are clearly related to the triskele theme gorgets, but are highly variant and represent at least two stylistic departures. Two of the swirl crosses are from southeast Tennessee – again, both are clearly related to the triskele, but are peripheral variants. Five tetraskelions are clustered relatively tightly along the western or lower portion of the Cumberland River (Figure 19). One tetraskelion from the Noel Cemeteries site (40DV3) in Davidson County is a classic Type II triskele – with the exception of a nicely fenestrated tetraskelion in the center (Moore and Smith 2009: Figure 89). That this example dates late is the sequence is suggested by its mortuary association with a *Matthews Incised* var. Matthews "froglet" jar, which dates to the fifteen century AD later (Moore and Smith 2009: Figure 78).

Two other triskele substitutions should be noted – one in which the triskele is replaced with an equal arm cross, and the other where a "spider" takes the place of the triskele. Three examples are known that substitute the triskele with an equal arm cross. The first is believed to come from Stewart County, Tennessee. The second is from Williams Island, Hamilton County. The third is from the Hixon site, also in Hamilton County, and is of particular interest because of its stratigraphic relationship post-dating a triskele (see Figure 13, upper).

FIGURE 19. Late triskele variant with tetraskelion/swirl-cross "substitution," Montgomery County, Tennessee (*Courtesy, Tennessee Division of Archaeology).*

The final substitution is the striking one from Toqua Burial 241 previously described, where fields 1 and 2 are substituted by a spider. This gorget seems clearly to have been manufactured in East Tennessee, as it exhibits the classic Southern Appalachian plain border. Accurately dated to AD 1410, the association of this gorget with 10 Lick Creek "rattlesnake gorgets" is a critical one.[7]

Hence the known substitutions are: Triskele = Tetraskelion = Equal-arm cross = Spider. From an iconographic perspective, this suggests that there is some meaningful relationship between the interchangeable motifs. In his discussion of cosmological motifs, George Lankford (2007a:33) discusses a "provocative set of symbolic connections: world axis = tree = sun-fire = star column…. The mysterious tree of the Omaha became a pole in their ritual life." Here, I explicitly suggest that the center substitutions on the triskeles – like those on many other Mississippian gorgets – are based around differing regional and artistic interpretations of the *axis mundi* concept.

Cosmograms and Sacred Narratives

Some of the simplest of the shell gorgets (cruciform depictions, for example) certainly seem to represent "centering" objects – placing the wearer in a specific relationship to the cosmos. More complex designs, like the triskele, have been interpreted in several cases as positioning the wearer along a specific version of the *axis mundi* – linking This World with an entry point or portal to other worlds. Gorgets interpreted as such cosmograms include the Hightower Turkey Cock and Cox Crested Birds, the "Hand," and the "rattlesnake" (King et al 2018; King and Sawyer 2017; Lankford 2007a, 2007c; McDonald and Smith 2018). For example, in their discussion of the "rattlesnake gorgets," King et al. (2018:145) "it is no doubt intentional that what may be interpreted as the eye of the snake on the gorgets is one large concentric circle…. This portal connects to the part of the center of the cosmos that continues from This World into the Beneath World… If the location of this image is the sky, then the snake on the 'rattlesnake gorgets' must be spinning at the center of the cosmos in the night sky… Its eye is a portal that connects the night sky to This World."

On the triskeles (and other similar MCR objects), I interpret the nested fields as a two-dimensional "plan view" of a three-dimensional cosmos – and more specifically a two-dimensional representation of the *axis mundi* (literally "world axis"). Throughout much of the indigenous Americas, the *axis mundi* is conceived as a variety of different supranatural pathways that allow humans (or their souls or messages) to travel from the mundane world to the "Other Worlds" (usually perceived as the "Above World" and "Beneath World").

Discussion and Conclusions

Two examples of "hand gorgets", both probably made at the Castalian Springs Mounds, show an intimate linkage with the triskele gorgets in the form of eight circumpuncts in the "rays" of the sun circle (Figure 20). Assuming these interpretations of a series of gorgets as cosmograms is correct, then the triskele is a representation of a different, but equally important, constellation.

In closing, I offer four propositions concerning the triskele gorgets:

> Proposition 1: The triskele gorgets depict a specific means of travel along an *axis mundi* originally conceived by artisans in the Middle Cumberland Region – an axis that connects This World with an identifiable constellation in the Night Sky (i.e. the Beneath World).
>
> Proposition 2: The axis in question involves a dance circle.
>
> Proposition 3: The constellation in question has several stars primarily "readable" as seven to nine but containing as few as five and as many as fourteen.

FIGURE 20. "Hand constellation" gorget from Smith County, Tennessee, probably crafted at the Castalian Springs Mounds, Sumner County, Tennessee (*Kevin E. Smith*).

Proposition 4: The constellation is question was one so widely understood throughout eastern North America that the triskele was able to successfully cross multiple cultural and temporal boundaries.

If we accept these propositions as viable based on broader interpretations of Mississippian shell gorgets and their iconography, at least for the sake of argument, George Lankford (2007d:162-181), in a chapter titled "The Star Cluster," examined the distribution of Native American folklore relating to the asterism called the Pleiades. While I am unable to substantiate in any definitive fashion an association between this asterism (prominent clusters of stars) and these gorgets, there are several indirect lines of evidence that merit consideration.

The Pleiades are the most visible of the asterisms in the night sky – and play a role is the cosmological lore of virtually all human societies. As described by Lankford (2007d:162), "of the asterisms in the sky, the most universally recognizable is the Pleiades…. As opposed to most of the constellations, which are spread out across the sky in large unique patterns, the Pleiades is visibly a cluster, readily identifiable by even the most untrained eye. There is no other asterism that remotely resembles it. The cluster itself makes no particularly memorable pattern, so the fact of the cluster is the focus of attention…" As such, the Pleiades meet the criterion to comfortably address Proposition 4 – very widespread geographic recognition by indigenous peoples.

As described by Bob King in *Sky and Telescope* (2014): "[the Pleiades are] called the Seven Sisters, but can you see all seven? ... When asked how many stars they see in the cluster, beginning observers will usually say five. That's what most of us see at a glance, and it makes sense because the five brightest Pleiades… range from magnitude 2.9 to 4.2, well within the grasp of most observers from a reasonably dark sky site…. The bright five plus two not-so-difficult core cluster stars make seven. Add in seven more faint hanger-ons… and you've got 14." The number of circles (stars?) in the ophidian band range from four to thirteen (in most cases accompanied by a center circle making the effective range five to fourteen). By far, most of the triskeles show six to eight "stars" in the ophidian band, with the center "star" making that seven to nine. So, this would appear to address Proposition 3 – the number of stars visible to most observers.

Kent Reilly has interpreted the plain

band serving as the border of many Mississippian gorgets as a dance circle (Reilly 2004:31, 2007:40-41). In particular, he uses a "cut out and fold up" technique to illustrate the position of two celestial dancers in ritual garb dancing around a sacred pole or *axis mundi* (Really 2007: Figure 3.1): "the surrounding double-line border assumes the shape of a dance or ceremonial circle, within which two individuals perform a ritual on either side of a striped center pole (Reilly 2007:41). In their examination of the Hightower style gorgets from Etowah, Georgia, Reilly and Garber (2011:299) note: "the designation 'Dances' is used in all themes because the placement of the feet and the positioning of the raised legs appeared strikingly similar to dance steps." On Craig style figural gorgets, the motifs frequently include a petaloid similar in some respects to the scalloped border of triskeles – a motif identified by Reilly (2007) as a celestial locative. Assuming Reilly's interpretations are correct concerning these motifs, on triskele gorgets, the position of the "dance circle" plain band and petaloid have been switched – shifting the petaloid to the outer field and the dance circle into medial position. Hence, Proposition 2.

The most common indigenous folklore of the Eastern Woodlands relating to the Pleaides fall into two broad categories: 1) Dancing Children; and 2) Scolded children not fed; rise to sky (Lankford 2007d:166-180). The Dancing Children story is distributed from the northern Plains to the Amazon basin, again addressing Proposition 4. Perhaps the most complete version of the story was recounted by Edward Cornplanter (Parker 1923: 83-85):

> *Seven brothers had been trained as young warriors. Each day they practiced in front of their mother's lodge, but this did not please the mother. With the boys was an uncle whose custom it was to sit outside the lodge door and drum upon a water drum, that the boys might learn to dance correctly.*
>
> *In time the boys became perfect in their dancing, and then announced that they were about to depart on an expedition to test their skill. The seven assembled about the war post and began their dance. They then went into their mother's lodge and asked her to supply them with dried meat and parched corn for their journey but she sent them away, scoffing at their presumptions Again they danced and again returned for food. "I will not give you so much as a small cake of corn bread," said the mother hoping to restrain them. But they went back to their dance. A third time they returned but again were repulsed. The fourth dance started and the oldest youth changed his tune to the song of Djihaya. With great enthusiasm he sang compelling his brothers to dance a dance of magic. Hearing the weird music the mother rushed out of the lodge and saw her sons dancing in the air over the trees. This greatly startled her and she cried, "Return, my sons! What manner of departure is this?" But the song continued and the boys danced higher and higher.*
>
> *Again the mother cried, "Oh, my eldest son, will you not return?" But the eldest son would not listen, though his heart was touched. Then the mother screamed, "Oh my eldest son, will you not hear your mother's voice? Only look down to me!" Then was the oldest son's heart touched very deeply, but he did not respond, for fear of making his brothers weak. "Oh my brothers," he called. "Heed no sound from the earth but continue dancing. If you look down you shall fall and never more be able to dance."*
>
> *The mother now gave a heart-broken cry and called, "Oh my first born son, give your mother one look, -- one last look or I die!" This weakened the heart of the oldest son and he looked down toward the figure of his mother with outstretched arms, weeping for him. As he looked he lost his power to master the air, and began to fall. With great rapidity he fell until he struck the earth and penetrated it, leaving only a scar where the*

soil came together again. The mother rushed to the spot and swept aside the rubbish, but no trace of her son could she find. Finally looking up she saw her other boys dancing far up in the sky. They had become the "dancing stars."

In deep sorrow the mother with covered head sat beside the spot where her first born had fallen. For a whole year she wept as she watched. Winter came and her dancing boys appeared over the council house and each night were observed overhead, but no sign of her eldest could be seen.

Came springtime and the time of budding plants. From the spot where the eldest had disappeared a tiny green shoot appeared. This the mother watched with great solicitude. It grew into a tall tree and became the first pine. This tree was guarded by the melancholy old woman and she would allow no man to touch it; she knew that it was her son and would sometime speak to her.

The winds blew and the tree swayed, it began to speak, and the mother heard. Only she could interpret the sounds that came from the waving branches, only she could see the face of the young warrior with his plumes.

A careless hunter slashed at the tree and blood flowed, but the mother bound up the wound and drive other intruders away. In time the tree bore small short feathers (cones), and more trees grew. These the hunters slashed in order to get pitch for canoes and ropes.

Every winter the pine tree talked to its dancing brothers in the sky and the mother knew that her eldest son should be her comfort while she rested on this earth. (Edward Cornplanter, in Parker 1923:83-85).

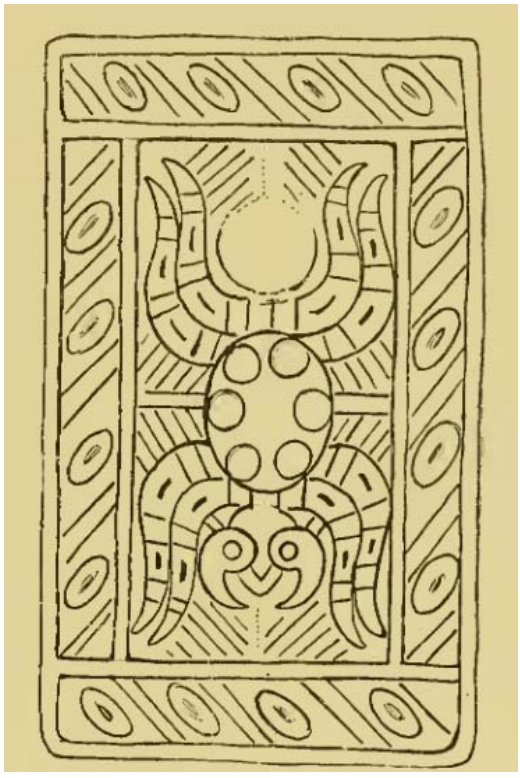

FIGURE 21. Sketch of the "Walnut Plaque" by William Henry Holmes (1903, Figure 2).

In other versions of the story, the pine tree is substituted by the cedar, which would be more likely in the Middle Cumberland Region. The details of the story address both Propositions 1 and 2 – a dance circle is the initial venue by which the children travel to the sky, and the transformation of the fallen son into a sacred tree reifies the *axis mundi* in perpetuity. Following Kneberg's interpretation that the triskele spirals counterclockwise from the center, I also note that most dances at ceremonial grounds in the Southeast proceed in a counterclockwise fashion (Howard 1968; King et al. 2018:46; Lankford 1987; Marquardt and Kozuch 2016).

Other objects exhibiting patterns of six and seven circles like those on the triskeles have also been interpreted as the Pleiades. A Cheyenne shield created between 1860 and 1868 includes a nearly identical depiction identified as the Pleaides:

(https://www.dia.org/art/collection/object/shield-36930; Kan and Wierzbowski 1979; Nagy 1994).

On the other side of the globe and created many centuries earlier, the Nebra Sky disc also shows a similar configuration interpreted as the Pleaides (Lobell 2019).

While not previously interpreted as the Pleiades, a strikingly similar configuration is depicted on the Walnut Plaque from the Perry site (1Lu25) in Alabama (Figure 21; Esarey et al. 2018) – perhaps providing some additional support for linkage between the spider and the ophidian band in the interior South. While missing the center circle, that portion of the plaque is damaged and was later restored, so it remains possible that the full seven were in place on this object originally. Reilly (2007: Figure 3.8) compares the Walnut Plaque with a Craig B "winged spider" motif and asserts that, "although currently no spider constellation is known in Eastern Woodlands Native American ethnographies, the iconographic and ethnographic evidence suggests that such a starry image may well have existed in the Mississippian period zodiac." While far from compelling, these tidbits suggest that the spider substitution on the Toqua Burial 241 gorget may make sense within this interpretive framework. Hence, I suggest the following equivalencies (Figure 22):

Center circle (Field 1) = Star on Earth = Eldest son = Cedar Tree = Sacred fire

Triskele (Field 2) = Path to the Night Sky (striped pole viewed from above)

Plain Band (Field 3) = Dance Circle

Ophidian Band (Field 4) = Pleiades as Portal to the Night Sky (Path of Souls)

Scalloped Border (Field 5) = Sun circle = Petaloid

While I do not suggest that this interpretation of the triskeles is a definitive representation of what their prehistoric creators and users had in mind, it represents the best answer I can offer at this point in response to the question "what is it all about?"

Conclusions

Triskele-theme gorgets have been acknowledged throughout the history of studies of Mississippian marine shell artifacts as unique and fascinating creations. They have also provided mysteries and interpretive puzzles throughout those decades. While I can hardly claim that this is the "final word" on the triskeles, I offer several conclusions based on this (on-going) study.

First, the geographic origin of the triskele genre seems clearly centered in the Middle Cumberland Region – with sites in both Sumner and Williamson County, Tennessee containing sufficient evidence to argue for possible centers of production. The diversity of representations of the center triskele and ophidian band combination at Castalian Springs (Type I) argues for multiple artisans with a shared emphasis on the meaning behind the enigmatic symbols. The more canonical form (Type II), I suspect, is formalized in Williamson County at the Gray Farm site -- although again the diversity of presentations suggests multiple artisans. By the end of the 1300s, triskele gorgets are being produced and distributed throughout the Middle Cumberland Region at multiple sites by multiple artisans.

The second concentration in southeast Tennessee suggests a strong and long-lasting connection between these two regions. While the nature of that relationship and mechanisms of interaction cannot be clearly explicated at this point, the timing seems to be primarily between A.D. 1300 and 1450 -- correlating to the decline of populations in the Middle Cumberland Region and likely dispersal of some segments of those populations to southeastern Tennessee (Meeks et al.

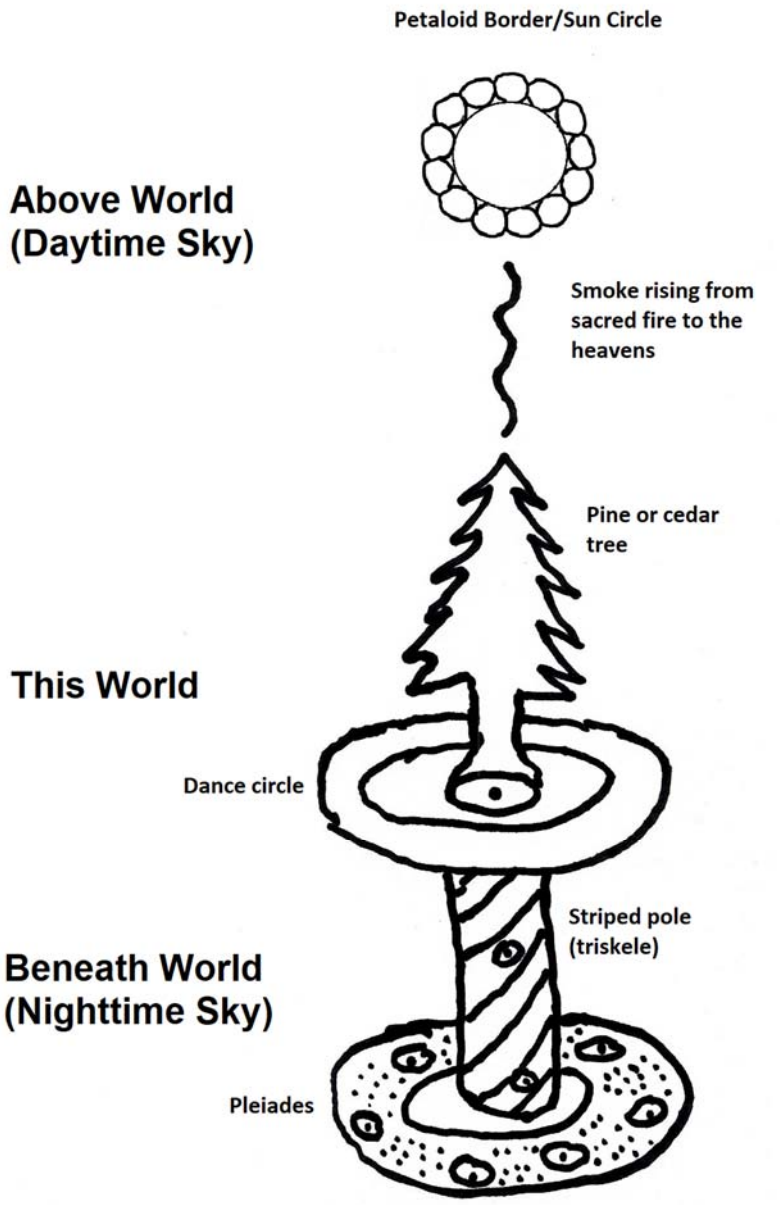

FIGURE 22. Speculative rendering of the "triskele cosmogram" (Smith 2018, Figure 3).

2019; Sullivan and Smith 2018). I submit that amongst those migrants were skilled artisans capable of producing the canonical form of triskele gorgets, probably at a site or sites on Williams Island in Hamilton County, Tennessee, and other nearby sites.

James Owen Dorsey (1894:385-386) provides some additional food for thought in relation to cedars, smoke, shells, and droughts:

> *at the time of the first thunder-storm in the spring of the year, the Lu̧ people [Thunder-being gens] put a quantity of green cedar on a fire, making a great smoke. The storm increased after the members of the other*

> *gentes offered prayers… When the war pipe is smoked by and Hañga man, he holds the pipe in his right hand, and blows the smoke into the sacred clam shell, in his left. The smoke ascends from the clam shell to the Thunder-being, to whom it is pleasant… The men of the two Hañga gentes unite in singing songs to stop rain, when fair weather is needed, and songs to cause rain when there has been a drought.*

As the unpredictable weather of the 14th and 15th centuries (including drought) in the MCR has been argued as a major contributor to evacuation of the region (Meeks et al. 2019; Sullivan and Smith 2018), it is intriguing to consider whether there is an additional relationship between the "meaning" of the triskeles and weather control.

In terms of ethnographic evidence for migrations from Middle Tennessee to the southern Appalachians, one debated topic includes the poorly known Napochies. Although the veracity of the event has been questioned by some modern scholars (Galloway 2006), the Spanish-Coosa expedition against the Napochies near Chattanooga is thoroughly documented and might have some bearing on the migration of outsiders into the southeast Tennessee region (Hudson, 1988, 1997; Hudson et al. 1989; Smith 2000; Worth 2003). As noted by Marvin Smith (2000:78-79):

> *Following the Tristan de Luna expedition of 1560, the Napochies disappear from the historical record until 1700. The sixteenth-century Napochie towns described by Luna's forces were probably the Audubon Acres and Citico archaeological sites near present-day Chattanooga, Tennessee. These towns were abandoned before the end of the sixteenth century, and two towns were established north of the Tennessee River in Moccasin Bend. A third settlement was established on nearby Williams Island in the Chattanooga area by the early seventeenth century. It is possible that the Napochies moved north to put the Tennessee River between themselves and the Coosa Indians and their Spanish allies. These towns were abandoned by about 1630. We can hypothesize that their inhabitants moved downstream to the Guntersville Reservoir area of the Tennessee River. Seventeenth-century archaeological sites are known in this area. The Napochies reenter history in 1700 when they appear on a town list prepared by the Frenchman Charles Levasseur as the "Napaches." They are listed immediately after the Alabamons, a group located near the junction of the Coosa and Tallapoosa rivers, suggesting that they lived in this area. This location is borne out on the Barnwell map of ca. 1722, which appears to list Nabootche (the legend is not clear) opposite Fort Toulouse. The town does not appear on Popple's 1733 map or on French maps of the 1730s, indicating that the town amalgamated with another by this time.*

Identified as "newcomers" to the region in the account, the ancestors of the Napochies are a possible candidate for an emigrant group from the Middle Cumberland Region. Unfortunately, lack of accessible modern archaeological data about the 14th and early 15th century occupations of Williams Island prevents a systematic evaluation of the hypothesis. More systematic examinations of the archaeological data from East Tennessee sites (for example, Long Island) for an MCR presence is on-going (Meeks et al. 2019; Sullivan and Smith 2018).

Chronologically, I argue that the triskele gorgets are created, used, and discarded primarily between A.D. 1275 and 1400 in the Middle Tennessee core area, and subsequently a secondary center of production was established in the southern Appalachians between ca. A.D. 1300 and 1450. Either canonical forms of the triskele (Type II) were brought by emigrants or MCR artisans produced them in their new

homes in the upper Tennessee River valley.

After transplantation, the Type II triskele quickly lost its coherence in this new setting – perhaps as coalescent communities negotiated new understandings of space, time, and community. The basic structure of the triskele is slowly converted to a cruciform – in some cases literally – and in others of Type V where the circles in the ophidian band are reduced to four equally spaced elements serving symbolically as a cruciform.

Ultimately, I suggest that the triskele was converted into the Lick Creek style of the rattlesnake genre – also laid out on the cruciform pattern, but still retaining vestiges of the three "arms" in the two jaws and neck of the serpent.

At the periphery, heirloomed and later versions of this type of gorget may have been deposited for another 50-75 years. However, the relative frequency of triskeles and the complete absence of any associations with European trade goods or well-documented indigenous diagnostics suggests that their deposition certainly ends prior to the mid-sixteenth century.

Finally, I conclude that the triskeles represent a regional interpretation of the *axis mundi* that linked the peoples of Middle Cumberland Region to the Night Sky via the Pleiades asterism. While the conventionalized motifs defy strong conclusions, as William Henry Holmes (1883:274) noted so long ago "w*hatever may be the meaning of this design, we cannot fail to recognize the important fact that it is significant - that an idea is expressed.*" While "pushing the envelope" with some of my interpretations, they remain consistent within my current understanding of Mississippian cosmology and marine shell gorgets.

Notes:

1 I acknowledge that different observers perceive the direction of rotation differently. Kneberg (1959) clearly illustrated her meaning in two figures. While many modern observers perceive the rotation as in opposition to that interpretation, I have retained her original designations and like her, have clearly illustrated them (Figure 2).

2 Two gorgets in the sample retain evidence of fenestrated triskeles but are too worn to distinguish any other features. Both are probably counterclockwise rotation, but if they were carved on the convex side, the opposite would be true. At least three triskeles are engraved on the convex side (one from Sumner County and two from Williamson County, Tennessee).

3 For the purposes of the analyses herein, I excluded over 50 gorgets that seem clearly to be "triskeles" to me, but are either too fragmentary, too poorly preserved, or available photographs were insufficient to permit confident tabulation of a sufficient number of the design fields. I also excluded a number of gorgets included by Brain and Phillips (1996) where the thumbnail images were not of sufficient quality for independent evaluation and better images could not be obtained.

4 Additions to the corpus of 104 triskele gorgets include 14 gorgets where the other fields are retained, but Field 2 is substituted by a swirl cross (n=10), equal-arm cross (n=3), and a spider (n=1). Since completion of the analysis, an additional two gorgets with substitutions have been identified, including one equal-arm cross and one spider.

5 Several of these gorgets are heavily worn and were not included in the corpus used for this study. However, all still preserve the heavy fenestration of the triskele itself and some maintain vestiges of a scalloped border.

6 The provenience and provenance of the Sumner County gorget is not particularly solid, and I am not uncomfortable reducing its significance in the overall interpretations of the patterning.

7 I also note that the initial appearance of the spider genre gorgets is in the Eddyville style centered on the Cairo Lowland/Ohio-Mississippi confluence region that includes at its southern margin the Cumberland River valley (see Esarey 1986).

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THE ARCHAEOLOGICAL LEGACY OF MACK S. PRICHARD, JR. (1939-2020): A TRIBUTE

Kevin E. Smith

Mack S. Prichard, Jr., Tennessee's first modern State Archaeologist (1971-1973), died peacefully on April 28, 2020 at the age of 81. While more widely remembered for his pioneering efforts during decades of service as Tennessee State Naturalist, Mack is usually given at least a "nod" for his other pioneering service as Tennessee's first State Archaeologist in the Department of Conservation. Addressing Mack's broader contributions to the preservation of natural areas during his decades of service is beyond the scope of this article and best left to others, so here I focus largely on remembering and acknowledging Mack's lifelong devotion to the preservation of Tennessee's archaeological and cultural heritage (particularly those sites that meshed with his great love of and admiration for the state's Native American heritage). Most of Mack's direct engagement with archaeology was during the 1950s-1970s – so much of my emphasis here is on that part and aspect of his life.

The archaeological community lost a valued preservationist, colleague, and friend on April 28, 2020 with the death of Mack Prichard (Figure 1). While more widely remembered for his pioneering efforts during decades of service as Tennessee State Naturalist, Mack is usually given at least a "nod" for his other pioneering service as Tennessee's first State Archaeologist in the Department of Conservation (1971-1973). Addressing Mack's broader contributions to the preservation of natural areas during his decades of service is beyond the scope of this article and best left to others, so here I focus largely on remembering and acknowledging Mack's life-long devotion to the preservation of Tennessee's archaeological and cultural heritage (particularly those sites that meshed with his great love of and admiration for the state's Native American heritage). Most of Mack's direct engagement with archaeology was during the 1950s-1970s – so much of my emphasis here is on that part of his life. After that, he returned most of his energies to the preservation of special natural areas – but he never failed to take the opportunity to engage in the

FIGURE 1. Mack at the Middle Cumberland Archaeological Society meeting, 17 Apr 2012 (*Kevin E. Smith).*

preservation of archaeological sites. In fact, it would be difficult to estimate how many thousands (tens of thousands?) of yet unrecorded archaeological sites were incidentally saved in the many natural areas that Mack helped to preserve from development.

Mack, Memphis, and the Mississippi River (1939-1964)

Mack was born in 1939 in Dyer County, Tennessee – the son of barber Mack S. Prichard, Sr. (1904-1981) and Bessie S. Prichard (1905-1995) – but spent his early life in what is now the Historic Messick-Buntyn neighborhood of Memphis where he attended Messick School. The family moved to Memphis not long after Mack was born so he and his sister Geraldine would have access to better schools. Born during the peak of the first major Tennessee archaeological projects of the Works Progress Administration, Mack grew up with the legacy of those projects – including the birth of the first university archaeology programs in the state and the Tennessee Archaeological Society (Smith 2016). Shortly before Mack was born, Civilian Conservation Corps workers clearing land for "Shelby County Negro Park" uncovered an impressive set of earthen mounds.

As they dug the park swimming pool in 1940, workers unearthed human burials, houses, and dense concentrations of artifacts. Soon dubbed the T.O. Fuller State Park Mounds or simply the Fuller Mounds, the University of Tennessee started test excavations later that year under the direction of Tom Lewis, George Lidberg, and Charles Nash – excavations which were so productive that plans for an outdoor museum and "wayside park" were quickly drawn up. Then came World War II and the plans for park development were postponed for over a decade.

The year 1951 was a major turning point for young Mack. A lecture on "Tennessee Indian life" seen at the Goodwyn Institute in Memphis inspired what became his life-long interest in all things Indian. That same year, the Memphis Archaeological and Geological Society (MAGS) was founded under the leadership of Wiley Wilcox and Dr. Perry Bynum – initially with the primary goal to promote Tom Lewis' vision of an archaeological park and museum at the "Fuller Mounds" (Brister 2012).

Mack's first experience with Meeman-Shelby Forest State Park (a nearly 13,000-acre hardwood bottom north of Memphis and T.O. Fuller State Park) was at a church camp when he was about twelve years old. He and a couple of his buddies discovered crinoids there and Mack started collecting them. Eventually they had amassed several thousand in a bucket and took them to the Memphis Museum, where the director Ruth C. Bush took them to meet a "little guy named Kenneth Beaudoin" (Prichard 2014). Beaudoin was an amateur archaeologist and full-time poet (sometimes referred to as the "Dean of Memphis Poets") who worked as a secretary at a local college. Beaudoin was also elected chairman of the Nodena Foundation when he helped found it in 1952 – an organization created with the goal of rehousing the extraordinary artifact collection of Dr. James K. Hampson. Although many years down the road, those efforts would eventually lead to the creation of Hampson Archaeological Museum State Park in Wilson, Arkansas. The boys joined the newly created MAGS on the spot.

Mack quickly became entranced with the deep Native American heritage of the region and started collecting artifacts on

both sides of the Mississippi River in Arkansas and Tennessee. He had long prowled the nearby Nonconnah Creek drainage, but his new-found interests led him back with a new eye. By 1952 at the ripe old age of 13, he and those same two buddies co-authored "Archaeological Explorations in the Lower Reaches of Nonconnah Creek, Shelby County, Tennessee 1952" (Kee et al. 1952), reporting on about 25 sites:

> *We found on our bicycles around Memphis two dozen Indian sites and we saved the artifacts and we labelled them and we eventually gave them to the university there. Some graduate student eventually wrote a master's thesis off of our archaeological exploration along the lower reaches of Nonconnah Creek. When Mr. Beaudoin and my sister helped me to publish that, Beaudoin said someday that will help you get a scholarship. Well he was right. Because I had published in 1952, Tulane gave me a doctoral fellowship -- at least, that was one of the reasons* [after he graduated from Southwestern at Memphis in 1961; Prichard 2014].

At the time, MAGS was also in essence the Memphis Chapter of the Tennessee Archaeological Society, and their survey report was noted at the 1952 TAS annual meeting: "Especially noteworthy was the exploration of the Nonconnah Creek area by Messrs. Prichard, Kee, and Lane. Mimeographed reports pertaining to this work were distributed to the membership… Programs given at the regular monthly meetings included a talk on geological specimens by Mack Prichard…" (Tennessee Archaeological Society 1953:47).

For almost a year from March 8, 1952 through April 30, 1953, MAGS sponsored excavations at the Fuller Mounds to jump-start the long-delayed plans for the park and museum (Beaudoin 1953). While the extent of Mack's participation in those digs remains undocumented, it was certainly one of the most influential events in his boyhood. Their efforts were very successful, and by 1955, Governor Frank Clement had allocated a small amount of funds for the park development. As Mack said in virtually every talk he ever gave, preservation rarely happens from the "top down" – it is the persistent efforts of local people that more often make the real difference. They tracked down Charles Nash, who had dropped out of archaeology during World War II and was working at a local printing company but was eager to return to his former profession. Nash was hired to supervise a labor crew from the Penal Farm to clear the site that would eventually become known as "Chucalissa" (McNutt 1968; Nash 1955). Clearly, Nash and Chucalissa were extraordinarily influential on Mack over the course of the next few years. As Mack moved from high school to college at Southwestern at Memphis (now Rhodes College), he would participate in the creation of the archaeological dig exhibits, reconstruction of houses and temples, and the museum. As time proceeds, we shall see that the legacy of those experiences would eventually help inspire the preservation of the mound centers at Mound Bottom, Link, and Sellars in Middle Tennessee.

If you knew Mack at all over the last 50 years, there are two basic facts you could always count on: a) when he opened his mouth he was about to say something about preserving or conserving something; and b) there would be a camera and he was going to take pictures. Both of those "things" go back to the 1950s and never paused. While Mack had an impressive personal avocational

FIGURE 2. Photograph of the primary Parkin Mound taken during one of the MAGS preservation presentations in 1954. (*Courtesy, Mack Prichard).*

collection of artifacts by the age of 15, he was from his teens already publicly engaged in efforts to protect archaeological sites from development.

On many occasions, Mack recalled his first public experience speaking to save archaeological sites as happening when he was 15 in 1954. Sometime that summer, Mound 1 at the Parkin Mounds in Arkansas was threatened by destruction for use as fill for a highway bridge across the river just south of the site. Harry McPherson from Ohio joined the Memphis Archaeological and Geological Society and came down to Memphis in July or August. McPherson had been involved for several years with the Ohio Indian Relic Collectors Society and their efforts to save numerous Ohio mound sites, including the Great Serpent Mound. When McPherson heard about the threat to the Parkin Indian Mound, he said "we have to stop 'em." So a delegation from MAGS, including Mack, went over to Arkansas and spoke to the Kiwanis Club about the need to preserve the site (Figure 2). Soon thereafter, they were contacted by the Rotary Club for a similar talk. Nobody from MAGS was available on the night the club met – except 15-year-old Mack. As he recalled (Prichard 2014; see also Hilten 2014, Prichard 2015):

> *When I was 15 my dad drove me over to Parkin Arkansas to the Rotary Club. There was an Indian mound which had been sold to the highway department for fill dirt to build a new bridge and our archaeology club in Memphis found out about it and one of our members was a Mr. McPherson from Ohio Historical Society and they had a great movement in their state to save*

FIGURE 3. Topographic map prepared by Mack and friends of about 25 sites in the Nonconnah Creek Drainage in 1952. (*Courtesy, Mack Prichard).*

their relics starting back in the last century when out of the country museums began looting the Ohio Valley for Indian relics. They started to save the Great Serpent Mound, the Chillicothe Mounds and other… Flint Ridge Ohio where the Indians quarried their arrowheads. So Harry came down to Memphis and saw the Parkin Mound about to be destroyed and he said we have to stop 'em. So, a whole delegation from our club went to the [Kiwanis Club] but the night that this club needed a speaker, no one could go but me so my dad drove me over there and I was scared to death. This was a hot August night and those days no air conditioning on a screened-in porch of a little café and there were a bunch of gentlemen in there – old planters you might call them – and I was nervous. I wrote up my notes in those days with fountain pen ink and the sweat poured off of me and washed away my notes. My knees were knocking, I could hardly stand up and I thought I had blown it, but afterwards this old guy came up and he said "sonny, you're right. They're not making any more Indian mounds. I own a thousand acres. I'll just give them that dirt from somewhere else. And he gave that mound to the city who gave it to the state and it's now Parkin Mound State Archaeological Park in Arkansas. And I thought, oh boy, this is what I want to do. So that was the first success.

While we don't know for certain how influential Mack's presentation as a teen might have been on the owners as no documentation on those 1950s preservation efforts has yet surfaced, the threatened use of the mound for fill was a "real event" documented in the Arkansas Archeological Survey files and the photograph in Figure 2 is currently the only known image of Parkin from the 1950s (Jeffrey Mitchem, personal communications, 2020). The impact on

Mack, however, is very clear as he told the story countless times as the "beginning" of his conservation career.

That same year, he would also make a major second effort to protect archaeological sites a lot closer to home along Nonconnah Creek by speaking before the Memphis City Planning Commission. With nearly 50 archaeological sites recorded along the creek by that time (Figure 3), Mack was invited by Mrs. Chester A. Wyatt, president of the Nonconnah Creek Watershed Association, to help her plea for cooperation with their watershed development plans ("Boy Archaeologist Tells Planners of Mounds," *Memphis Press-Scimitar,* September 1954). Mack's presentation argued that these lands should be set aside for city parks as Memphis expanded to the south – not only to preserve the archaeological sites, but also to help control erosion, flooding, and dumping in the watershed. The article points out that Howard Fullerton, the county planning engineer, was impressed enough to state he was copying the maps and added "we plan to ask subdivision developers to build around the sites so they can be put to future use." Mack would also mention the T.O. Fuller Mounds – "People from all over the country stop and pay to see Indian dwellings in their states, and there is no reason why such a site could not be developed here" (*Daily Republican*, 10 Mar 1955, Monongahela PA). The notion of 15-year-old high-school sophomore archaeological conservationist was so appealing that the article was distributed nationally by the United Press – ending up being published in literally dozens of newspapers east-to-west from California to North Carolina and north-to-south from Wisconsin to Florida. Mack already knew the value and power of good press.

With Charles Nash now in charge, the Fuller Mounds became known and promoted as "Chucalissa" ('abandoned house' in the Choctaw language). In spring 1955, Mack and his friends donated a "rock collection" to the Shelby Forest Museum, including petrified wood and arrowheads found nearby. The ranger offered him his first state position for summer 1955 as a seasonal naturalist – working part of the time giving nature tours at Shelby Forest State Park and the rest as Nash's assistant at Chucalissa ($200/month in those days). Using lots of local volunteer support, temples and houses were reconstructed, the typical early-20th-century "open air archaeological exhibits, and a museum were (more or less) completed by 1956. Protected by a palisade of logs and grapevine, the site was lacking only one thing.

In September 1954, Mack had taken a Trailway bus down to the Choctaw Indian Fair near Philadelphia, Mississippi, where he met what he always remembered as "some wonderful Choctaw":

> *When Chuck Nash said we can dig the archaeology, but we need some real Indians to help us guide people through the Chucalissa Museum, I said, I know where we can get the Indians. So, we called those Choctaw and they came up – two or three families and they brought their cousins and their extended tribal friends until finally we have a settlement in West Tennessee of several hundred Choctaw now which is good* (Prichard 2014).

Among them was a then young Choctaw girl for whom Mack later recalled having a crush (you know who you are). The West Tennessee Choctaw communities in Lauderdale and Shelby counties emerged in the 1950s at about the same time Chucalissa was being developed. The migration started because of both sharecropping opportunities and the

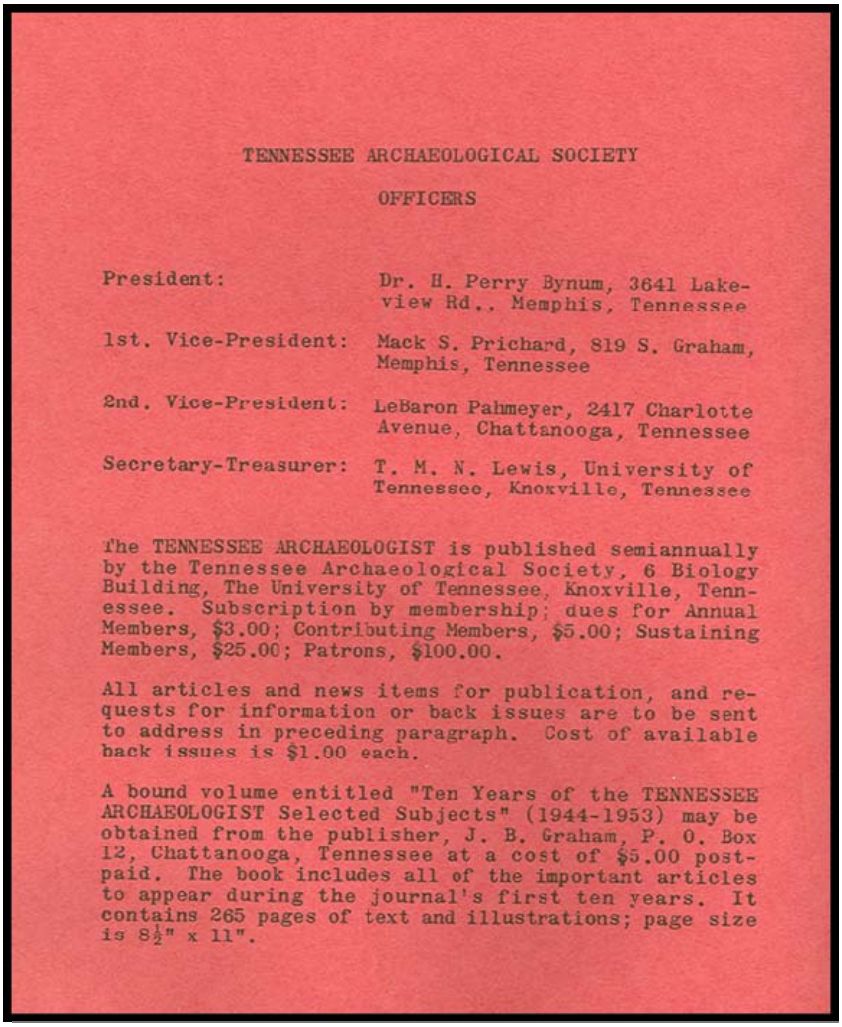

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FIGURE 4. Inside cover of the *Tennessee Archaeologist* Volume 11, Issue 2 (1955) showing Mack's election as 1st Vice President of the state society.

federal Termination and Urban Relocation Act that encouraged reservation Indians to move to urban areas in need of unskilled labor. Many of the Choctaw craftspeople viewed Chucalissa as an opportunity to promote and maintain their native traditions far distant from their parent community of the Mississippi Band of Choctaw Indians to the south – and most of the early living history demonstrations were done by Choctaw (Dye 2017).

At both the MAGS monthly meetings and the TAS annual meetings, Mack made important and influential contacts:

> *I met Chuck Nash, he was working at a printers company* [in Memphis] *at that time, but he was the one who had dug out at Mound Bottom… back during the 30s. Tom Lewis, the year I was born in 1939, was our state archaeologist for the conservation department. Later he went over and began the department of anthropology at UT. But I met him at the archaeological meetings, and he took me under his wing. As a young kid needs somebody to take an interest and he encouraged me. And so did his wife Madeline.* [Prichard 2009]

At one of these meetings, he would also meet Charles K. Peacock from Chattanooga, who had recently persuaded the Tennessee governor to allocate funds ($12,000!) to purchase the Duck River cache (now on display at the McClung Museum in Knoxville) when the Missouri Historical Society offered it for sale. Mack was entranced by the cache (as certainly anyone who sees it must be). At another meeting, he met Matthew Stirling of the Smithsonian's Bureau of American Ethnology, who added the lad to the "free subscription mailing list" for their publications – which he avidly devoured.

FIGURE 5. Chucalissa 1958. Upper: Choctaw stickball game; lower: reconstructed houses (*Courtesy, Mack Prichard)*.

As always, Mack dove into these new organizations with a passion. The first Memphis meeting of the TAS was in the Georgian Room at the Hotel Peabody in October 1953. The next meeting in Memphis was planned for October 1956. Frequently in those days, the President and 1st Vice President of the TAS were from the cities where the upcoming annual meeting was planned to be. So at the October 1955 at Knoxville meeting, Dr. Perry Bynum of MAGS was elected President – and Mack, at the ripe old age of 15, found himself as the youngest ever 1st Vice President of the Tennessee Archaeological Society (Figure 4; *Knoxville News-Sentinel*, 30 Oct 1955). Not too long thereafter, the TAS bylaws were changed so that officers had to be at least 18. Whether that had much to do with an uppity outspoken 16-year-old Vice President is unknown to me.

With more than 15,000 visitors to the not-quite-finished Chucalissa in July and August of 1956, it was clearly a hit – and Nash was appointed in 1957 as the first State Parks Archaeologist for Tennessee (Figure 5). Mack entered Southwestern at Memphis (now Rhodes College) that fall to pursue a B.A. in Anthropology. In October, Nash traveled to Jackson, Tennessee to speak to the newly formed Jackson Archaeological Society, an early chapter of the Tennessee Archaeological Society ("Archaeological Group to Meet," *Jackson Sun* 3 Oct 1957). In November, Nash returned to Jackson with Gordon Turner, Director of Tennessee State Parks, to take a tour of Pinson Mounds – which would lead to additional support for acquiring the site as a state park ("State Park Sought for Pinson Mounds," *Jackson*

FIGURE 6. Excavations at Chucalissa 1959. Mack at right in his parks uniform supervising students and volunteers (*Courtesy, Mack Prichard)*.

Sun 4 Nov 1957). I don't know that Mack was able to attend those events – having just started his first semester in college – but certainly the growing excitement about Pinson must have been a major point of discussion with Nash and others. Mack's engagement with Pinson Mounds would continue from Nashville in the 1960s and 1970s.

At about this same time, Mack met Robert Bruce "Bob" Ferguson Sr. (1927-2001) – a relationship that would remain important after Mack moved to Nashville in 1964. Although better remembered as an award-winning songwriter and significant RCA record producer, Bob's career started as a filmmaker. In 1956, Bob was hired by the Tennessee Fish and Game Commission to produce a series of short ecology films to promote conservation efforts. Bob filmed in Mississippi and at Chucalissa in the 1950s and 1960s (serving more formally as Preparator and Public Relations director at Chucalissa from 1961-1963). About 1963, Bob would start the Southeastern Indian Antiquities Survey in Nashville (today known as the Middle Cumberland Archaeological Society; Dowd and Smith 2008). Bob's relationship with the Mississippi Band of the Choctaw spanned nearly 50 years. His marriage to Martha Lewis, a Choctaw, led him to move to the Pearl River community in the 1970s, where he is credited as a pivotal leader in reviving stickball during his service as Tribal Historian, Museum Director, and public relations specialist (he is also remembered for penning the song "Choctaw Saturday Night"). In my conversations over the years with several Choctaw students from Pearl River attending Middle Tennessee State University, all remembered Bob as the sports emcee for the stickball games. Mack would also recall the first stickball games at Chucalissa in the 1950s.

But back to the 1950s. A formal summer archaeological field school was started at Chucalissa in 1958, drawing most of its students from Memphis State University and Southwestern at Memphis – including Mack (Figure 6). Mack would recall his experiences at Chucalissa years later:

> *The Chucalissa site in Fuller State Park was the Department's first archaeological development begun by Parks Archaeologist Charles Nash in 1955. I worked on this project from its inception and watched the public enthusiasm grow with its development. People came to look at skeletons preserved in-situ as they were found, and to see what else had been unearthed by the continuous excavation. They studied the artifacts in the museum exhibits, and then went out to watch the Indians actually make these handicrafts. Children learned that Indians were more than the grunting savages Hollywood movies showed. Many cross-cultural insights were exchanged with an Indian on one end of a log and a tourist on the other. A Choctaw, fresh from hometown prejudices, was heard to say, "I like working here with white folks who talk nice – I feel like a human being again"* (Prichard 1972:49).

Somewhere along the line, Mack learned the skill of flintknapping – and one of his jobs in 1958 was teaching some of the local Choctaw how to make arrowheads (*The Daily Standard,* Sikeston MO, 1 Dec 1958; *The Jackson Sun*, 26 May 1971). Mack always claimed it was first published in TIME magazine (*Rhodes Today* 13(3):16, 1987). Mack almost certainly must have acquired this skill through one or more members of MAGS. Mack also started taking pictures of just about everything. About 1957, a little deer ran through his camp at Shelby Forest State Park and he did not own a

camera to capture the moment. Taking a photograph of a deer might not seem like such a big deal today, but you have to remember that the Tennessee deer population reached a low of less than 2000, most in East Tennessee, in the 1940s (up to over a million today). So, for 1957, it was still a rare moment. He went to a pawn shop the next day and bought an old Leica – and spent the rest of the summer paying if off. In June 1959, he took his eye off a copperhead while focusing his camera for a closeup and was fanged on the thumb, which swelled up to the size of an orange despite anti-venom shots ("Foto Fan Bitten by Copperhead," *Morristown Gazette Mail*, 11 Jun 1959; "Keep Alert," *The Jackson Sun*, 11 Jun 1959). Mack remembered that event:

> *"As a matter of fact, I was bitten by a snake, a copperhead, while I was digging on a Choctaw site a few years ago," Prichard said, "I was pretty sick. After that, the Choctaws gave me my Indian name Sinta Kopoli* [more correctly Sinti kopoli]*. In Choctaw, that means Snake Bite." But even if the copperhead is deadly poisonous and its bite sometimes fatal, Prichard blames only himself for the accident. "You need fear nothing in Nature if you are gentle," he said. "You don't disturb snakes when they are mating or shedding their skins. And you don't make sudden moves. That frightens them. My mistake was that I made a sudden move to get a child out of the snake's path. That startled the snake into attacking"* (Davis 1972).

While at Southwestern College at Memphis (1957-1961), Mack pursued anthropology (and everything else) with that same passion he retained for the rest of his life. Despite the apparent emphasis on fraternities at Southwestern, Mack remained an "Independent" during his years there but participated in extracurricular activities such as the award-winning Southwestern Judo Team (*The Sou'wester*, Friday 8 May 1959). Although I assume that his work with Chucalissa and the Memphis Museum took up much of his time, he also used his photography skills in a significant National Science Foundation grant to one of his anthropology professors at Southwestern (Figure 7 and Figure 8):

FIGURE 7. Mack doing photography as part of the National Science Foundation grant at Southwestern, 1959 (*Courtesy, Mack Prichard)*.

> *Summer Research Grants for 10 Science Students. Southwestern has received more than $13,000 in grants from the National Science Foundation for student research in anthropology and physical sciences this summer. Students received individual grants are Mack Prichard, anthropology…. Anthropology project director, Dr. Jack R. Conrad, and his student photographer will travel to numerous museums and several universities to make color slides of skeletons, fossils, and artifacts, which will be supplement by a descriptive manual for teaching… Amounts of departmental grants were: anthropology, $4,400* (*Southwestern News* 23(4):7).

FIGURE 8. Mack working at the Memphis Museum on Prehistory Exhibits, 1961 (*Courtesy, Mack Prichard*).

The product was an anthropology slide collection and teaching manual offered for sale by Dr. Conrad covering "symbol systems, technology, social organization, religion and the arts" (Lasker 1963:4). In his last year at Southwestern at Memphis, he was hired by the Memphis Museum "to make an exhibit on the different diagnostic arrowheads and potshards" (Prichard 2009). Upon his graduation in 1961, Mack entered Tulane University to pursue a graduate degree, but as he put it "I starved out" and returned to Memphis in 1962 with Tanya, his beloved wife of many decades. In later years, he would complete some additional postgraduate coursework at both the Memphis State University and the University of Tennessee.

Although federal funding for President John F. Kennedy's Youth Conservation Corps was stymied by debates in

FIGURE 9. Presentation of National Historic Landmark plaque for Pinson Mounds, September 1964.

Congress in the early 1960s, citizens of Memphis proceeded to create their own version (patterned on a similar program in Philadelphia). Kennedy's federal proposal was modeled on the Civilian Conservation Corps and was aimed at curbing juvenile delinquency. The Memphis program started work on July 15, 1963 with $12,575 allocated through the police commissioner's office. The plan called for about 25 delinquent-program boys to work at various jobs in parks under the supervision of two group leaders and a director. Mack was hired as the program's first director ("Youth Corps Formed," *Knoxville News-Sentinel*, 30 Jun 1963). He spent about six months getting that program off the ground. Then, Ed Meeman, one of Mack's most important mentors in Memphis, recommended him for the Parks Naturalist position that opened in the Nashville office. He started his new full-time job with the Department of Conservation in February 1964. Just a few weeks before, Pinson Mounds had been approved as a National Historic Landmark.

Mack "Hits the Ground Running" Nashville (1964-1970)

Although "hitting the ground running" as Parks Naturalist, Mack could not ignore the enormous potential for preserving Pinson Mounds as an archaeological park (and the biodiversity of the lands surrounding it). In September 1964, Mack accompanied Commissioner Don McSween to the ceremony at which the National Park Service presented the National Historic Landmark plaque (Figure 9). As plans and proposals gained traction, Mack was assigned by Commissioner McSween to give a tour of the site in January 1966 to representatives of the National Park Service about matching funds to purchase additional acreage for the site ("Pinson

Mounds Being Studied by Park Service," *Jackson Sun*, 27 Jan 1966). It seems probable that Mack actually asked McSween to assign him to that task… But that is perhaps something we will never know for certain. Unfortunately, for everyone concerned, the park development was stalled out by the re-election of Governor Ellington in 1967, who apparently saw little potential for Pinson. Mack, however, never abandoned hope – and not long thereafter would work under a new Governor with a slightly different notion about parks and preservation. Back to that in a few years.

While Mack was a faithful alum of Southwestern at Memphis throughout his life, he didn't falter in taking them to task for the mastodon bones that were discovered during construction of the new wing on their biology building in 1967 (Figure 10). As reported in the Southwestern college paper:

FIGURE 10. Removal of mastodon remains from Science Building construction site at Southwestern, 1967 (*Courtesy, Mack Prichard)*.

> *Fossil found on site of New Biology Building. Workmen excavating for the Science Center unearthed two massive legs bones in clay some 12 to 14 feet below ground level. Dr. Julian T. Darlington, associate professor of biology, said, "We think it is a pretty good guess that they are mastodon leg bones because of their size." Because of the moisture of the clay, they were not too well preserved. However, biology professors sprayed them with plastic to prevent further deterioration…. Dr. Darlington said a suggestion to dig for the rest of the fossil was rejected. "It would delay the building and we might not come up with anything. I don't think it is a rare animal." Plans are to display the bones in front of the Science Center. They were found at the spot where the biology wing will go* [*Southwestern News* XXXVI(2):7. 1967].

Mack wrote a letter to the Editor soon thereafter:

> *Letter to the Editor. I was sorry to learn that Southwestern did not preserve the mastodon bones <u>In Situ</u> where they were found below the biology building. Perhaps no other institution has had such an opportunity for a similar exhibit. Had this happened elsewhere in the state, my department would have acted. Where was our foresight? Mack S. Prichard '61. Tenn. Dept. of Conservation. Nashville, Tennessee.* [*Southwestern News* XXXVI(1):20. 1967].

Mack's grandfather acquired a mastodon tooth somewhere (presumably on or near his farm in West Tennessee) about 1900, and later in 1976 a mastodon would surface in Mack's favorite Nonconnah Creek drainage (Brister et al. 1981; Smith 2019). Mack always had a special love of

and concern for fossils.

In the late 1960s, several significant things happened at the national, state, and local level that merit some mention as context – although Mack was only directly involved in them to varying degrees. First, beginning in the mid-1960s, an extraordinary construction boom in Middle Tennessee threatened the destruction of dozens of surviving major archaeological sites, including several of the remaining Mississippian mound centers. The Southeastern Indian Antiquities Survey founded by Bob Ferguson expanded dramatically in 1965 to salvage information from bulldozers – an expansion that would bring Bob and Mack back together to help save both a sabertooth tiger and Mound Bottom.

In 1965-1967, the Arnold site (40WM5) and Ganier site (40DV15) – a Mississippian era mound center and village respectively – were both threatened by subdivision developments. SIAS volunteers salvaged almost 300 stone-box graves and some limited information on associated structures in front of the bulldozers. In those days, prehistoric Native American graves were afforded no protections on private developments and could simply be destroyed in the name of progress (state law was changed in 1984, so all human burials are now afforded the same protections regardless of age). These two highly visible salvage projects heightened the profile of the SIAS to the point that it was finally officially chartered on February 14, 1967 – and Ferguson began to dream much bigger for the organization. By April 1968, the SIAS had started publishing *Chahta Anumpa* "The Choctaw Times" in cooperation with the Mississippi Choctaw – the circulation of the newspaper was 20,000 including free distribution to all tribal members. And – Bob's newest and biggest project was "Save Mound Bottom" – with the vision of purchasing the site and building an Indian cultural center in collaboration with the United Southern and Eastern Tribes (USET). It was almost certainly the latter vision that brought Mack back into more frequent touch with Bob Ferguson and the SIAS.

Second, in 1966, passage of the National Historic Preservation Act elevated the national status of archaeology substantially. As the first comprehensive historic preservation law in the United States, it authorized creation of the National Register of Historic Places and incorporated substantive recognition for archaeological sites. At the state level, the trickle-down was a "Tennessee Antiquities Act" bill that was introduced in 1968 to create a Division of Archaeology in the Department of Conservation. Eventual passage of the bill in 1970 (but initially without funding) would lead to a three-year side-trip in Mack's naturalist career. Just before leaving office Governor Ellington appointed members to the newly created Archaeological Advisory Council – with the first duty to solicit nominations and applications from qualified archaeologists for the position of Tennessee State Archaeologist. Members included: Dr. Ronald Spores (Vanderbilt archaeologist); Dr. Alfred Guthe (University of Tennessee archaeologist); Dr. Charles McNutt (Memphis State University archaeologist); Dr. Charles Wayland (Tennessee Historical Commission); Travis Binion (Tennessee Archaeological Society) and Bob Ferguson (Southeastern Indian Antiquities Survey) (Figure 11).

The third major factor was revival of the Tellico Dam project on the Little Tennessee River – a project that Mack opposed for both environmental and archaeological reasons. Among many

FIGURE 11. Mack's first Tennessee Archaeology Advisory Council. L to R: Travis Binion (Tennessee Archaeological Society); Robert Ferguson (Southeastern Indian Antiquities Survey – now the Middle Cumberland Archaeological Society); Dr. Charles McNutt (Memphis State University); Dr. Ron Spores (Vanderbilt University); Dr. Alfred K. Guthe (McClung Museum, UT Knoxville) (*Photograph courtesy, Mack Prichard)*.

other sites, the reservoir would flood the locations of many 18th century Cherokee towns, including Chota, Tanasi, Toqua, Citico, Mialoquo, and Tuskegee, and British Fort Loudoun. Although blocking the dam project proved unsuccessful, "salvage" of archaeological major sites was now mandated by law. Hence, an unprecedented number of new professional archaeologists converged on some of the largest archaeological salvage projects ever conducted in Tennessee (including Nick Fielder, who would later also serve as State Archaeologist).

Mack was constantly on the road giving nature talks and leading hikes as Tennessee State Naturalist – promoting in every instance the value of acquiring additional parklands and natural areas. Just for example, his schedule for August 1969: August 6, Norris Dam; 7 Big Ridge; 11 Montgomery Bell; 12 Henry Horton; 13, Davy Crockett; 14 Cumberland Mountain; 15 Warrior's Path; 18, Standing Stone; 19 Pickett; 20 Harrison Bay; 21 Booker T.

Washington; 22 T.O. Fuller; 23 Meeman-Shelby; 25 Reelfoot Lake. Somewhere along about here, Mack developed his seemingly miraculous ability to change clothes "on the fly" (ala Clark Kent's telephone booth). In a single uninterrupted day on the road, he might be seen having coffee with some locals in a diner dressed like a farmer. Travelling to his next official event at a state park, he would show up in full park ranger attire. Then later in the day, visiting a college, he would show up in sports coat and tie. A handy magical ability for someone whose public preservation talks numbered in the thousands and included all kinds of constituencies.

With creation of the federal Bureau of Outdoor Recreation in 1963 and the Land and Water Conservation Fund in 1965, millions of federal matching dollars became available to states to develop new parks. Thanks to the grassroots efforts of the Jackson Archaeological Society (with strong support from the Tennessee Archaeological Society), Pinson Mounds State Park was already in process. In Manchester, strong local support had also set Old Stone Fort State park in process. The success of Chucalissa in Memphis in drawing hundreds of thousands of tourists clearly underlined the potential for visitation to archaeological parks – but local and state funding for land acquisition and development was slow in coming. With the carrot of matching federal dollars and strong local support, the Tennessee legislature quickly came around. Mack firmly believed that the successful preservation of any important place rarely came from the top down – he always gave credit and acknowledgement to the local organizations. Indeed, he is given credit for helping to organize and found over 30 such conservation organizations across Tennessee during his career.

These parks were decades in the making, as funds were slowly approved for land acquisition and then development of facilities – including museum/visitor centers:

> *Four new parks have been approved and work will begin soon… Pinson Mounds near Jackson…. And Old Stone Fort, about 80 acres at Manchester* ("New Parks, Auditors are Part of Plan," *Daily News Journal* 15 Aug 1965).
>
> *There'll be the 900 acre historic Pinson Indian Mound Park near Jackson. Of great pre-historical interest will be the Old Stone Fort park of 500 acres near Manchester* ("State Gets $2,609,170 from U.S. for Recreation," *Tennessean* 4 Sep 1966).
>
> *State Conservation Commissioner E. Boyd Garrett announced Wednesday the Federal Bureau of Outdoor Recreation has approved matching federal funds for the establishment of Old Stone Fort State Park in Coffee County near Manchester… Land acquisition cost for Old Stone Fort is expected to be $443,462 for 651 acres…* ("Nashville: parks get federal funds," *Kingsport News* 15 Jun 1967).
>
> *Development of Old Stone Fort State Park will begin soon and should be completed by 1975, state official announced here recently… an additional 200 acres of land may be acquired as a buffer around the 466 acres already purchased by the state for the park…* ("Old Stone Fort Park Work Nears," *Tennessean* 12 Sep 1967).

Frank Clement served his second term as Governor from 1963 to 1967. In those days, Governors could not serve two consecutive terms, but it was not uncommon for them to run again – so Clement was in office for the dedication of Old Stone Fort State Park. Mack frequently quoted Clement as saying "you know tourists are easier to pick than a bale of cotton and they're worth more,"

FIGURE 12. Governor Frank Clement (center) at the dedication ceremony for Old Stone Fort, 1966 (*Photograph courtesy, Mack Prichard)*.

underlining his desire to shift the Tennessee economy away from agriculture to other areas. Mack recalls that one of his first major tasks as State Naturalist was writing the draft of Clement's speech for the Old Stone Fort dedication ceremony (Figure 12).

All the preceding factors would ultimately contribute to sufficient support statewide for the "Tennessee Antiquities Act" to finally pass in 1970 -- just prior to the election of Winfield Dunn, a dentist from Memphis, to succeed Buford Ellington as Governor. With a new governor in office in 1971, both Mack and the stalled-out Pinson Mounds State Archaeological Park found a fresh start. For one thing, Dunn was married to Mack's distant cousin Betty, which gave them a mutual acquaintance. For another, one of Dunn's major goals for his administration was to increase Tennessee tourism – and new parks were a central part of that plan.

In 1971, the Southeastern Indian Antiquities Survey Board of Trustees was expanded to include Mack in his position as Tennessee Parks Naturalist. Mack was then elected in May of that year as President of the SIAS. Another major discovery in June 1971 by avocational archaeologist and SIAS member John T. Dowd would draw Mack's special attention to the Brick Church Pike Mounds in Nashville (Barker and Kuttruff 2010; Dowd 1974). The discovery of a remarkable set of Mississippian ceramic figurines in a structure at the site fascinated Mack – along with his eventual realization that the site contained the last

largely intact prehistoric platform mound in Davidson County.

As the Tennessee Archaeological Advisory Council began narrowing down the candidates for the newly created position of State Archaeologist, Mack was included – apparently at the request of the Conservation Commissioner and perhaps Governor Dunn as well. Since he was under consideration for the position – and Bob Ferguson was a member of the interview panel representing the SIAS – Mack resigned as the SIAS president but kept a position on the Board.

Mack as State Archaeologist (1971-73)

In August 1971, Mack, 32 years old, was appointed as state archaeologist to head Tennessee's new Division of Archaeology in the Department of Conservation. There was no funding yet for the Division of Archaeology, so Mack was "on loan" from Tennessee State Parks – perhaps another factor in the decision to appoint Mack rather than hire an "outsider." As Mack would explicitly tell the first three professionals he hired as regional archaeologists, his agreement with the commissioner was he would take on that job for three years to get the TDOA off the ground, funded, and running. In later years, Dr. Charles McNutt recalled to me (and David Dye) his objections at the time to Mack's appointment as he felt strongly that the State Archaeologist should have a graduate degree in archaeology. In hindsight, however, Charles also acknowledged that Mack's connections and experience in state government were critical assets in getting the new division set up, staffed with qualified archaeologists, and in acquiring some critical archaeological sites as state parks and archaeological conservation areas.

> *Prichard heads archaeology unit. Mack S. Prichard, 32, state parks naturalist since 1964, has been appointed state archaeologist to head Tennessee's new division of archaeology in the department of conservation. Announcement of the appointment was made by Governor Winfield Dunn and Conservation Commissioner Bill Jenkins* (*Johnson City Press,* 11 Aug 1971).

Mack's appointment met with approval and optimism in Jackson, Tennessee:

> *Good news for Pinson Mounds Project. The appointment of Mack S. Prichard as state archaeologist is encouraging for the development of Pinson Mounds as a state park and a major tourist attraction. Through the efforts of State Sen. Lowell Thomas, the Dunn administration and Conservation Commissioner Bill Jenkins some real progress has been made in realizing the long-delayed dreams of the Pinson Mound development. Prichard, 32, has been the state parks naturalist for seven years and first worked for the state, at the age of 16, as a naturalist for Shelby Forest State Park. His knowledge and interest in Indian sites will give the Pinson Mounds program an ardent booster within the Department of Conservation* (*Jackson* Sun, 12 Aug 1971).

The first staff of the new Division of Archaeology consisted of Mack and his personal assistant Susan Richardson, also on loan from State Parks. Their first office was "a 10-by-12 cubicle on the ground floor of a state office building on West End Avenue… Between three battered desks, two jam-packed filing cabinets, bookshelves packed with a wide range of books on philosophy and economics and Indian lore (along with small busts of Albert Schweitzer and Beethoven), Prichard and his secretary are shoe-horned into opposite corners to operate the state-wide agency within the Department of Conservation" (Davis

FIGURE 13. Volunteer John Leverett and State Archaeologist Mack Prichard at the Smilodon Site (40DV40) (*Courtesy, Les Leverett*).

1972).

The same month Mack was appointed, the SIAS/MCAS became involved in one of the greatest Pleistocene fossil discoveries in Nashville history. During construction of the 28-story First American Bank in downtown Nashville, some unusual bones and teeth were discovered during blasting for the 30-foot deep foundation. As Bob Ferguson recalled, "[it was a] beautiful August day in 1971… the telephone rang. It was Tom Seigenthaler, who handled Public Relations for the First American National Bank… He asked if I could come by the construction headquarters of the planned first American Center and look at some material he believed was of archaeological interest… We were looking at Tennessee's 'first' Saber-toothed cat" (Ferguson quoted in Dowd 2010:72). Both despite and because of his new responsibilities as State Archaeologist, Mack could not resist the lure of a Smilodon – so he not only volunteered his later afternoons and weekends to salvage at the site, but also used his influence to have a large water tank truck loaned from the National Guard to help water-screen the truckloads of dirt that had been removed before the smilodon canine was noticed (Figure 13; Dowd 2010:67). Decades later, TDOA archaeologists would revisit the smilodon as extras in a commercial promoting the new logo of the Nashville Predators (Moore et al. 2016). Also during the first month of his tenure as state archaeologist, Mack visited the Brick Church Pike Mound site with John Dowd (Barker and Kuttruff 2010), where he immediately decided the site needed to be acquired as a state park (Figures 14 and 15).

FIGURE 14. Portion of prepared clay house floor and some of the ceramic figurines excavated by John T. Dowd, 1971. Figurines are currently on display at the McClung Museum of Natural History and Culture (*Courtesy, John T. Dowd)*.

FIGURE 15. Brick Church Pike Salvage. Upper: John T. Dowd (left) and Mack Prichard (right) examining the house floor, 1971. Lower: Prepared clay floor identified during 1972 topsoil removal in preparation for construction of Ewing Baptist Church (*Courtesy, Mack Prichard*).

One of Mack's primary charges was to identify archaeological sites for potential acquisition as state parks – and to further the already on-going acquisition and development of Pinson Mounds and Old Stone Fort as state archaeological parks.

> *Pinson Mounds Park Cleared. Land Acquisition is Begun. May Open by Early 1975…. The state has begun acquisition of 496 acres… The state currently owns 85 acres previously acquired… In addition the state as an adjacent 215 acres that the department of conservation's division of forestry used for a tree nursery* (*Jackson* Sun, 22 Sep 1971).

Mack also immediately hit the ground running to raise awareness about the new Division of Archaeology – and to raise public support for the acquisition of archaeological sites as state parks.

> *24th annual 1971 Tennessee Archaeological Society meeting… will be held at Murfreesboro Oct. 9…. Will conclude with a banquet at which the recently appointed state archaeologist, Mr. Mack Prichard, will speak on "conserving our Archaeological Heritage (Clarksville Leaf Chronicle,* 3 Oct 1971).

> *"We hope to develop several archaeological parks across the state like the one at Chucalissa Indian Village near Memphis and the Old Stone Fort near Manchester," he said. "I would like to see sites like Mound Bottom on the Harpeth River, Sellars Farm in Wilson County, and Red Clay Council Ground in Bradley County protected. The state will be surveying the best sites remaining under its new archaeological program and we hope eventually to hire several archaeologists who will be able to assist in the salvage of Indian sites across the state* (*Jackson Sun*, 10 Oct 1971).

The key missing element was state funding for the TDOA. Mack pursued every opportunity to promote the necessity of preserving important Native American sites as parks. Mack was also well known for his ability to quote extensively from philosophers and naturalists – a love that can be traced back to his childhood experiences with Kenneth Beaudoin. On January 9, 1972, Mack made the cover of the *Tennessean Sunday Magazine* (Davis 1972) with the title "Philosopher with a Shovel" (Figure 16). Mack outlined several of his goals during that interview:

> *Prichard's immediate goal is to help the state of Tennessee acquire sites of 10 valuable Indian "diggings" – scattered from a high temple mound on a lovely hilltop overlooking Brick Church Pike to the Chickasaw flatlands in West Tennessee and the Cherokee mountains in East Tennessee…. Once the top 10 sites on his list are owned by the state and protected from bulldozers making way for highways and subdivisions, Prichard thinks the lessons to be learned can be brought into dramatic focus. It is his hope that the state will eventually set up museums on the sites, and surround them by small parks where the public may see the recreated Indian villages, temples and burial mounds…. "These were colorful people, with rich traditions and subtle ceremonies," he said. "We can reconstruct their lives from relics left in Tennessee mounds – whole villages that we could rebuild to show the public today how a different way of living worked for thousands of years…." In some cases, Indians will be invited to serve as guides at the ancient villages, and they will sell their pottery and other craft work to the visiting public.*
>
> *As the only archaeologist on the state payroll, Prichard rushes about the state, from Indian mound to Indian village. Without more archaeologists to help with the inspections, valuable sites will be lost forever, he said. Part of his chase is on the lecture tour – to tell business men and women's civic groups, school children and public officials about the gold mine of*

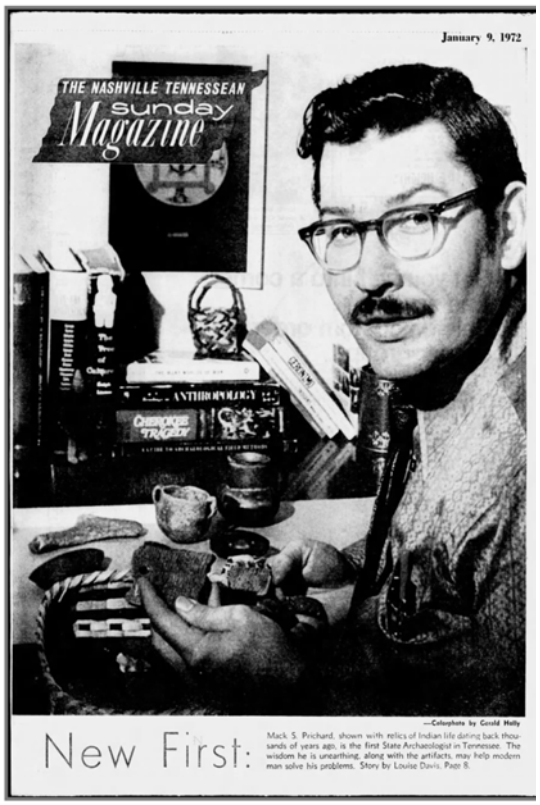

FIGURE 16. Front cover of the *Nashville Tennessean Sunday Magazine, 9 January 1972,* "Philosopher with a Shovel" by Louise Davis (original in full color).

Indian history Tennessee has just under the surface of her woods and fields, her filling stations and downtown banks.

Part of his chase is to round up support for further state fund to preserve the Indian sites before they perish. Part of the chase is to organize teams of students and other trained archaeologists to work on the sites.

One typical week recently found Prichard speaking to a Clarksville civic club on Monday noon and inspecting a nearby Indian cave that afternoon [now Dunbar Cave State Park]; lecturing a Knoxville civic club on Tuesday; back in his Nashville office Wednesday to work on the first budget his division will submit to the state legislature; out early Thursday morning to tell the story of Tennessee Indians to kindergarten children, and escorting state commissioners to Mound Bottom, 40 miles from Nashville, that afternoon to show them the significance of Indian relics there.

On Friday, he spoke to a DAR group about Indian life here, and then drove to Knoxville to speak to the East Tennessee Historical Society.

…On Saturday of that busy week, after conferring with other archaeologists late in the night, he drove on to another East Tennessee town to speak to a civic group. By 8 p.m., he and a group of spelunkers were entering a cave near Bristol, where they explored miles of corridors with ceiling 100 feet high and animal bones showing where deer and other creatures had come tumbling through sink holes to their death centuries ago.

At 10 a.m. on Sunday, emerging from the cave after a full night's walking and climbing, Prichard met a group trying to preserve an Indian site on the Holston River.

"We need four archaeologists to cover the state," he said. "I am trying to hold things together till I can get some help. My great fear is that we will lose some valuable sites before we can get around to investigating them."

"Most of what we have been doing in Tennessee has been salvaging Indian sites, trying to save what's left from destruction," Prichard said.

"Now that Tennessee has established a Division of Archaeology, we can develop the state's first preservation system. Most of what we are doing now is just a small sample of what we need to do."

"Our first hurdle in the coming legislature is to get support for this program," Prichard said. "We still have the opportunity to buy these valuable sites, excavate them and interpret them to the public. It is part of our Tennessee heritage."

Using his connection with Governor Dunn, Mack gave one of his rousing and passionate speeches about the importance of Pinson Mounds and the other sites on his list to an assembled

FIGURE 17. Mack (holding microphone) addressing Governor Winfield Dunn and legislative contingent at Pinson Mounds, 1972 (*Courtesy, Mack Prichard*).

crowd of legislators (Figure 17):

> *Anyway all the grim looks of these fellows here are because for the first and I think only time the Governor (Dunn) invited the legislature to go see what the money ought to be spent for and what it shouldn't be spent for. So, we're on top of the Saul's Mound, I believe, in Pinson, and they're all grim because I just asked them for a million dollars for the archaeology budget. And my advisory council thought I had lost my mind, but I thought if we don't ask big we'll never grow. So, we got $850,000. We bought half a dozen Native American sites. We hired three archaeologists and a staff. And in about 2 or 3 years we were off and going* (Figure 20; Prichard 2009).

The ten sites Mack identified for state acquisition included, Reelfoot Mounds, Obion Mounds, Dover quarries, Link, Mound Bottom, Brick Church, Sellars, Big Bone Cave, Red Clay and Tenase.

Governor Dunn's February 1972 budget request to the legislature for State Parks included (among others) the following sites: Bone Cave Archaeological Site, $30,000 to purchase site; Sellars Farm Archaeological site, $50,000 to buy site; Harpeth Mound City, $50,000; Brick Church Mound, $80,000; Duck River Temple Mounds, $41,000 to purchase site; Dover Flint Quarries, $31,000 to purchase site; Old Stone Fort, $30,000 for group lodge renovation; Obion Mounds, $39,000 to purchase site; Reelfoot Mounds and Flubbs, $30,000 to purchase site; Pinson Mounds, $40,000 for design; ("$18 million Is Asked for Tennessee Park System", *Jackson Sun* 22 Feb 1972).

In order to bolster his understanding of how ancient sites were interpreted around the world, Mack took a month-long vacation to visit important archaeological parks in Europe. While in New York City, he took the time to visit the Heye Museum of the American Indian in June 1972 –

FIGURE 18. Castalian Springs Gorget used as the first TDOA logo (*Photograph taken by Mack Prichard at the Heye Museum of the American Indian, New York City, June 1972)*.

where he photographed the Castalian Springs gorget that became the logo of the TDOA (Figure 18): "One sophisticated Indian design – now used on the stationery of the newly-created Division of Archaeology --- was discovered long ago on artifacts found at Castalian Springs, in Sumner County…. The figure dates from approximately 1300 A.D., long before the white man came to Tennessee" (Davis 1972). Mack was thrilled when the state managed to acquire the Castalian Springs Mounds in 2005 – the first state acquisition of a Middle Tennessee mound site for preservation in many decades.

In Europe he visited the Parthenon and Pompeii among others. He also hiked to Stockholm Sweden to attend the Miljoforum (Environmental Council), where he met Thomas Banyacya – a traditional Hopi leader – and other indigenous peoples attending from the Brazilian Amazon. Later he would visit Teotihuacan and other important sites in Mexico.

Back at work later in 1972, Mack proceeded to spend the money from the legislature. He hired his four proposed archaeologists – three regional archaeologists for West, Middle , and East Tennessee (John Broster, Carl Kuttruff, and Brian Butler), and a historical archaeologist (Joe Benthall). Now funded, the TDOA moved to new (but only slightly larger) office space downtown (Figure 19 and Figure 20). As Mack noted:

> *I met Hawk Littlejohn who was a medicine man from North Carolina. He was somewhat attracted to our Division secretary Susan Richardson. And I think it was also the other way around. They're sitting in the Division of Archaeology, at that time, we had a conference room equal to the distance between those two pillars and over here to this wall. And in that room we had six desks and five telephones. And it was kinda wild….* (Prichard 2009).

Mack's "List of 10" led to the most successful large-scale acquisition of archaeological sites for preservation in Tennessee history, but a few fell through the cracks. Tenase, often referenced as the Cherokee town that provided the name of "Tennessee" for the state, was inundated by the waters of TVA's Tellico Reservoir. Escalating land values and development pressure prevented the purchase of the Brick Church Pike Mound – that last surviving major Mississippian mound in Davidson County finally fell to the bulldozer in 1984 (Barker and Kuttruff 2010). The Obion Mounds and Dover Quarries also proved elusive. However, the list of successes was still stellar and remains the core of the state's archaeological parks and archaeological management areas.

Mack's fascination with caves came from several different aspects of his personal and professional interests. As unique ecosystems, they appealed to his

FIGURE 19. The first three Regional Archaeologists hired in 1972: L to R: Carl Kuttruff, John Broster, Brian Butler (*Courtesy, Mack Prichard*).

naturalist side. The fact that many caves also contain fossils of ancient creatures – like Big Bone Cave – appealed to his lifelong fascination with Pleistocene fauna. Big Bone Cave – one of Tennessee's thirteen National Natural Landmarks and managed by Rock Island State Park – was named for the discovery of the bones of a giant ground sloth in 1811. The cave also preserved remnants of mining operations from the War of 1812 and the American Civil War. Mack visited there as early as 1966 with Dr. Ric Finch (who describes himself as an "unrepentant spelunker").

Somewhere during his service as State Archaeologist, Mack found time to retrieve the Tennessee Department of Conservation Photograph Collection

FIGURE 20. Hawk Littlejohn and Susan Richardson in TDOA's second office, ca. 1972 (*Courtesy, Mack Prichard*).

(1937-1976) and arrange for their transfer to the Tennessee State Library and Archives – including over 21,000 negatives and more than 11,000 photographs:

(http://tsla.tnsosfiles.com.s3.amazonaws.com/history/state/recordgroups/findingaids/TENNESSEE_DEPARTMENT_OF_CONSERVATION_PHOTOGRAPH_COLLECTION_1937-1976.pdf)

Mack was always thinking about preserving all kinds of things for the future.

Having completed most of his agreed-on tasks as the first modern State Archaeologist, Mack announced in August 1973 that he would be stepping down as State Archaeologist at the end of the year and returning to his naturalist endeavors in State Parks. Joe Benthall would be appointed as State Archaeologist in his place, leading to the hiring of Samuel D. Smith as State Historical Archaeologist in 1974. Thanks to the untiring efforts of Mack during those three years, the TDOA was left with a solid foundation for the next 50 years of archaeology.

Mack's On-Going Legacy

His departure as State Archaeologist did not end Mack's interests in the preservation of archaeological sites and caves. One memorable cave that Mack always liked to talk about was Devilstep Hollow Cave in Cumberland County. In September 1974, he accompanied Dr. Nick Crawford and his geology students to Devilstep Hollow Cave. Crawford would later create the Center for Cave and Karst Studies at Western Kentucky University in 1978, the first center of its kind in the United States. While a boy, Crawford had seen the rock art in the cave and returned with students to officially document it. Mack went along and was stunned by the amazing petroglyphs. Mack told of sitting in the cave's darkness talking of spirituality and then the lights came on, revealing the rock art over their heads. Over three decades later, the Tennessee Parks and Greenway Foundation was able to acquire the site, which is now managed as part of Justin P. Wilson Cumberland Trail State Park. In his own words (Figures 21 22; Prichard 2009):

"I would say over the years Tennessee's lost more archaeology than we'll ever recover, which is sad. We were able to get [Devilstep Hollow Cave]… the Parks and Greenway Foundation whittled the owner out of the first million, raised the second million, and got a government grant for the third and that's how we got this incredible cathedral in the earth. Now Native peoples can't build a cathedral like they can in France. They don't have the tax base that the church had at that time, and so they found these caves to have the acoustics, where they could go back in the insides and have their sacred songs and their medicine and their chanting and the sound is unbelievable. It's the same way at Lascaux France. They're just beginning to figure out what was really going on. And back in the inner chamber you have a whole panoply of… monolithic ax, another one here with the tip on the end, an eagle priest with a weeping eye design and a scepter, a flared eagle tail, and the head of a sacrificial victim I suspect with his last gasp. The lips and the eye. And it goes on around… 30 over 30 different pictographs here. This is one of the richest caves in the country according to Dr. Simek, the head of UT, who's an expert. Now we own it. And we've got a gate to keep the Kilroys at bay from defacing this wonderful work."

While Mack's interest in preserving significant high-visibility archaeological sites never stopped, he had done his part in helping to further the development of our state archaeological parks and conservation areas and setting a solid foundation for the Tennessee Division of Archaeology. For the rest of his career, most of his prolific energy and efforts turned more explicitly to helping preserve hundreds of thousands of acres of natural areas through state ownership. He knew, perhaps as well as anyone else, that the golden era of support "just to save archaeological sites" was over in the mid-1970s. He also knew that those natural areas and parks contained untold numbers of unrecorded archaeological sites that would be preserved through their acquisition. We do not really know how many tens (or hundreds?) of thousands of important archaeological sites are preserved in all of those places. What we do know is that they are there protected along with everything else – just not identified yet. But they will be.

I met Mack sometime in the mid-1980s. Because of our many mutual interests, we would run across each other frequently for the rest of his life. Some 1 million driving miles, 100,000 plus photographs, and untold thousands of public presentations later – Mack's legacy is enormous and on-going.

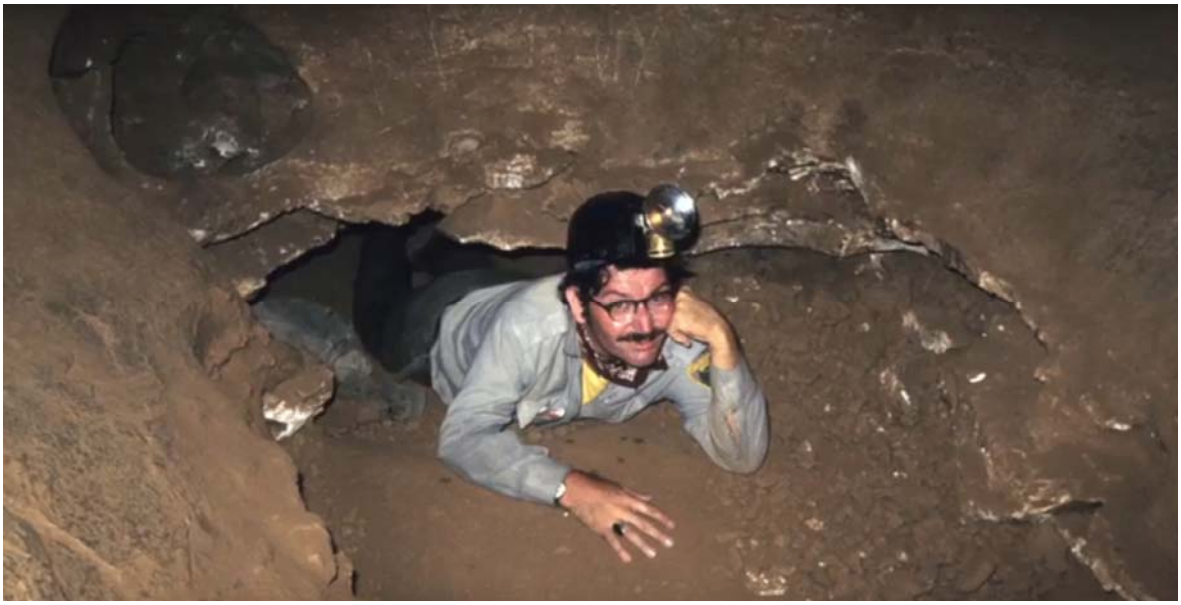

FIGURE 21. Mack in "the crawl" at Devilstep Hollow Cave, Cumberland County, 1974. (*Courtesy, Mack Prichard*).

FIGURE 22. Dr. Nic Crawford looking at rock art in Devilstep Hollow Cave, Cumberland County, 1974 (*Courtesy, Mack Prichard*).

In 2014, the Friends of South Cumberland State Park partnered with Mack to create the "Mack Prichard Legacy Project" – to date, over 5000 of Mack's photographs have been scanned, over a dozen videos of his presentations, and additional digitized materials are now online at:

https://www.friendsofsouthcumberland.org/mack-prichard-legacy-project.html

If pictures are indeed "worth a thousand words," then Mack has left us some 10 million words to preserve and ponder upon. As I said in the introduction, Mack's many other contributions as State Naturalist (and State Naturalist Emeritus) are best left to others more knowledgeable than me. But I think Mack would find this a fitting tribute to his sometimes-undervalued archaeological legacy. The torch has now been passed– we all should stop for a moment and think about spiderwebs -- *Archaeology is like spider webs: to hook us together, to hook the living with the past… it is important to know who lived in these hills before we came, to see what traces we may leave for those who come 600 years from now* – Mack S. Prichard (quoted in Davis 1972).

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EXPANDING THE PREHISTORIC ROCK ART DATABASE OF THE MIDSOUTH 2010: NEW SITES IN TENNESSEE AND NORTH GEORGIA

Jan F. Simek, Alan Cressler, Sarah C. Sherwood, and Sierra Bow

In 2010, the University of Tennessee Cave Archaeology Research Team (CART) investigated several new rock art localities in Tennessee and Georgia. A petroglyph at Burgess Falls, first thought to be prehistoric, probably has a nineteenth century historic origin. A new open air site on the Cumberland Plateau conforms in its content and context to a number of prehistoric rock art localities nearby. A third site in northern Georgia represents a new kind of rock art context in a so-called "Rock Town" feature on the top of Lookout Mountain; the implications of this site for Mississippian religious landscapes, and for other potentially similar sites in Tennessee and elsewhere are discussed.

[Editor's Note: In the following text, comments added to the original 2011 presentation from the perspective of 2020 are indicated by italics.]

Almost every year for more than a decade, members of the Cave Archaeology Research Team (CART) at the University of Tennessee, Knoxville, have made annual presentations at the Current Research in Tennessee Archaeology (CRITA) conference organized every year by Kevin E. Smith of Middle Tennessee State University and Mike Moore of the Tennessee Division of Archaeology. 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. 2017; Simek et al. 2018; Simek et al. 2019). This paper is one from those past presentations, the CRITA report we gave in 2011 concerning newly discovered rock art found in 2010. We have not changed the temporal perspective of this paper from that in the original presentation. We have added a more recent chemical analysis of paint from one of the sites discussed in 2010, as this analysis fit well into the earlier discussion. We have also added more recent literature citations where appropriate.

In 2010, the field activities of the UT Cave Archaeology Research Team were relatively limited, at least in comparison to most other years. There are two reasons for this. First, several of our team experienced job changes that interfered with fieldwork, whether because of changing affiliations (Sarah Sherwood went from the faculty at Sewanee to Dickinson College in Pennsylvania and now is back at Sewanee) or assignments (Jan Simek spent several years in administration at UT). Second, and more importantly, in 2007 it became clear that bat populations living in caves in Tennessee were increasingly threatened by a fatal disease encroaching from the Northeast—a fungal infection called White-Nose Syndrome that causes infected animals to wake up from hibernation earlier and more often than healthy bats, leading to metabolic problems and ultimately, to exposure, starvation, and death (Blehert et al. 2009). As conservationists, we need to understand the issue, our legal responsibilities, and to contribute to averting this environmental crisis. For

FIGURE 1. Photograph of the Burgess Falls Petroglyphs taken in 2007. Note rectangular outline grooves and four smaller looped squares in lower left quadrant (*Kevin E. Smith*).

these reasons, and for the most part, we stayed out of caves in 2010. Despite these impediments, CART investigated three new and one previously-identified rock art localities in Tennessee and North Georgia in 2010. We'll discuss each of these in turn.

The first site we call the Burgess Falls petroglyphs. This site was brought to our attention in 2007 by Kevin E. Smith, who sent us a photograph of some engravings on the horizontal surface of an exposed limestone rock at Burgess Falls State Park in Putnam County. He also gave us directions for finding the petroglyph. We visited the site in December of that year, located it, and made our own photographs of the rock. The day of our first visit was overcast and the surface of the rock, while very close to the Falling Water River, was dry with flat, even light over the surface. At that time, we were able to see an incised rectangle that appeared to have been produced with a fine edged tool (Figure 1); this rectangle contained four smaller rectangles in the lower left quadrant (Figure 2). These smaller components were of particular interest, as in all four cases, the squares had loops at the four corners, resembling the looped square or endless scroll found on Cox Style gorgets in Middle Tennessee and seen as one of the defining elements of that artifact type (Brain and Phillips 1996:9). Lankford (2007:10) suggests that on Cox Style gorgets, the centers of the corner loops are often defined with engraved pits, and that is the case for all of the loops on the Burgess Falls petroglyphs. During our first visit, we could see that there had been engraving in other areas inside the enclosing rectangle, but those areas appeared damaged and eroded, and we

FIGURE 2. Closeup of two of the interior squares at Burgess Falls showing the continuous looping line forming each element and pits at the centers of the four loops on each figure (*Kevin E. Smith*).

could not distinguish any details. This first visit to the site led us to believe that the Burgess Falls Petroglyphs were reasonably prehistoric in origin.

We returned to Burgess Falls in July 2010 to check on the petroglyphs, to make new photographs, to monitor the rock holding the glyph (to observe if it was submerged in the river which happened periodically at high water), and to see if there had been discernible erosion on the surface. On the day we were there, a dappled light fell on the rock, normally not conducive to proper rock art observation and photography (Figure 3). As difficult as this made visibility of the petroglyphs, it was clear under these conditions that there were letters inscribed within the bounding rectangle. The letters included “S,” “E,” and “P.” There were numbers as well: “8” and perhaps “4” were inscribed across the top of the rectangle. There were also engravings that might have been letters along the right side inside the boundary, although these were still difficult to decipher. None of these were visible in the light conditions prevalent during our earlier visit. We think the writing is possibly an English language date, September of what was probably 1884, corresponding to a time when the Burgess family (after which the Falls are named) operated first a gristmill and then a sawmill near the rock. This family was descended from a Revolutionary War ancestor, Tom Burgess, who settled the area in 1793 as his continental army land grant (West 2017). Thus, the Burgess Falls petroglyphs are most likely historic in age, produced with metal tools, and may represent a monument associated with the construction or operation of the Burgess Mill enterprises at the end of the nineteenth century. The Burgess Falls Petroglyph is

FIGURE 3. Photograph of the Burgess Falls Petroglyphs taken in 2010. Despite the dappled light, there is detail here not evident in the image shown in Figure 1. The four looping squares are clearly visible; there is writing at the top of the interior that appears to say, "SEP 8" perhaps followed by a "4" that may be a date. Other markings are evident to the left of this and in the lower right quadrant, although these are not decipherable.

probably not of Native American manufacture.

Three other new rock art sites are all likely prehistoric in age. Still in July 2010, we visited a Warren Point Sandstone outcrop at the base of the Pennsylvanian caprock of the southern Cumberland Plateau, Tennessee. In a southwest facing rockshelter, 25 m wide and 2-3 m high with a small water seep at the south end, we found a single red pictograph painted onto a rock curtain inside the overhang (Figure 4). This isolation of one or a few glyphs is typical of Tennessee's open air pictograph sites and contrasts with cave art sites in the same area. We were not the first to discover this pictograph, but despite its being known among local residents, there was no formal record of the site's position, and we had been chasing the rumor of this pictograph for several years.

The image is shown in natural light in Figure 4a and enhanced in Figure 4b using the *Dstretch*® plugin developed by rock art scholar Jon Harmon (Harman 2005, https://www.dstretch.com/) for the ImageJ image processing software produced by the National Institutes of Health. The figure is about 1.5 m in overall length and quite complex. Two pairs of sinuous horizontal

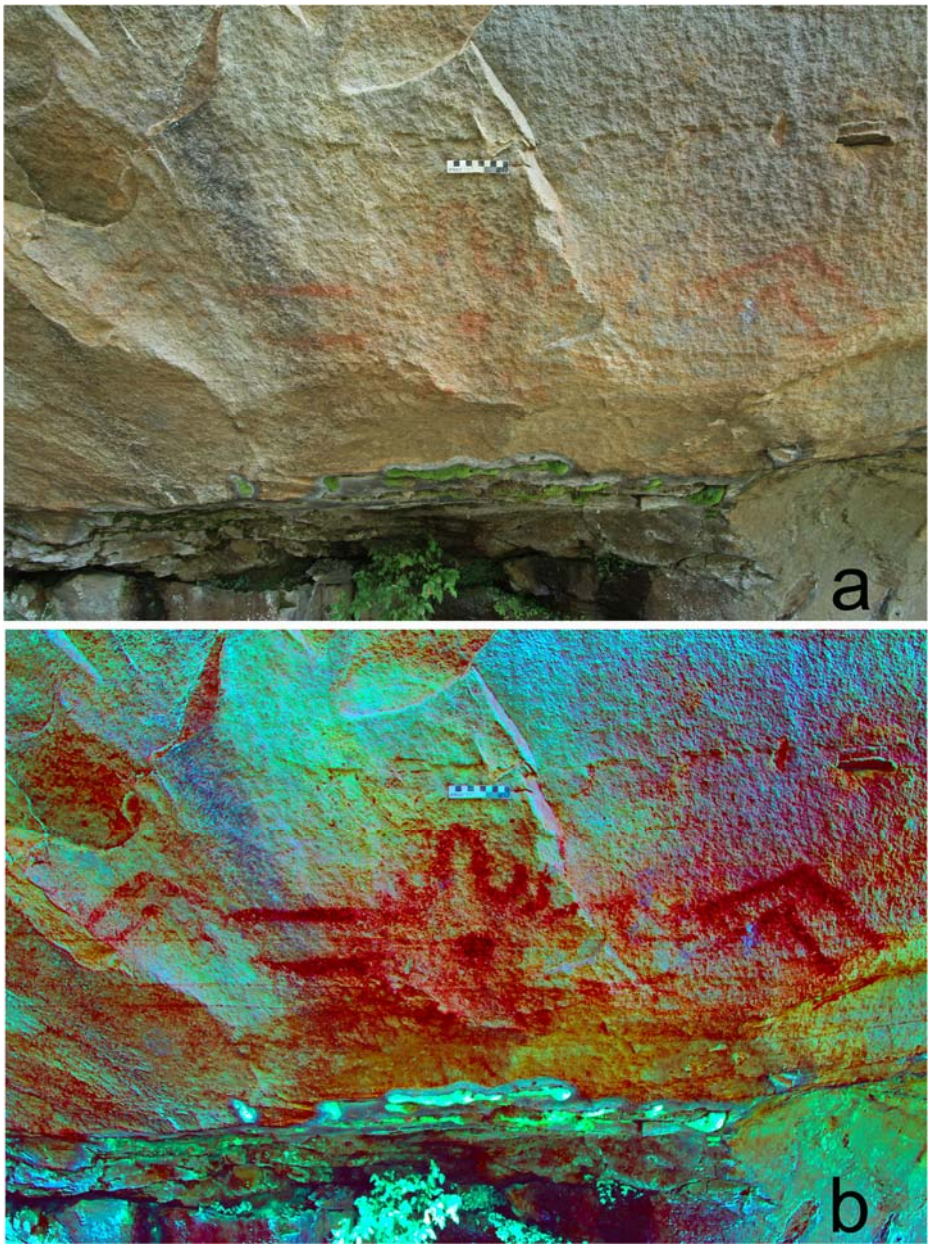

FIGURE 4. Pictograph of a "bat" from a rockshelter on the southern Cumberland Plateau. a: raw photograph of the sandstone surface containing the glyph; b: same photograph processed using *Dstretch*® LRE color enhancement.

lines extend out roughly 0.5 m each way from a central oval feature which is connected to both lateral projections (Figure 5). Inside the central oval is a red dot. Above and below the central oval are projections and lines, some of which are integral to the oval line, others detached from the main drawing. Because of the overall aspect of the figure, we interpret the image as a bat viewed face-on, with perked ears and a round nose. The face also composes a "dot-in-circle" motif like those we have seen in other Plateau open-air pictograph sites (Simek et al. in press).

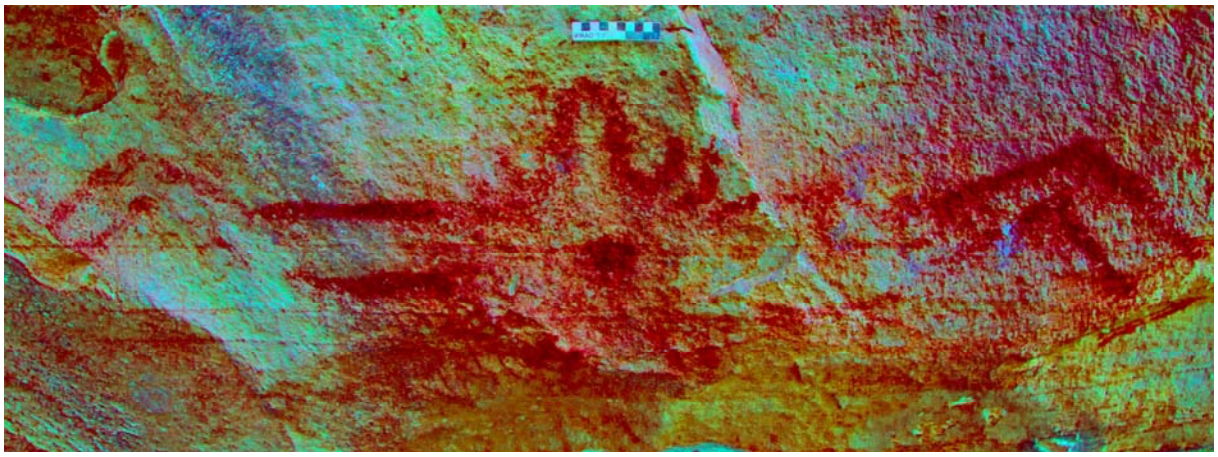

FIGURE 5. Close up of the enhanced "bat" image showing the central head with perked ears; the dot in the center of the face; and parallel lines extending outward on either side, both bent down at the ends, suggesting wings.

FIGURE 6. Serpentine line pictograph from Painted Bluff, Alabama with shapes described within the curving line (Simek, Cressler and Herrmann 2013:227).

This motif has been referred to by some as a symbolic portal between the visible and the spiritual worlds of indigenous southeastern peoples (Hall 1989; Hall 1997). We will retain this "bat" interpretation, although we think there are other possible elucidations—a serpent form with something inside, for example,

which one sees in other rock art images in the region, like the one in Figure 6 from Painted Bluff in north Alabama (Simek, Cressler, and Herrmann 2013; Simek et al. in press).

The context of this site is like many other open-air pictograph localities in the South Cumberland. The site is in the sandstone cap rock of the Plateau at 1750 ft amsl. The shelter is heavily looted, and clearly contained artifacts in addition to the art, witnessed today by a few lithics on the floor. Nothing chronologically diagnostic was seen in our 2010 visit. In a nearby rockshelter, one that did not contain rock art, looter pits were observed along with lithic debris on the shelter floor, but again, nothing was found to suggest temporal position. A short distance away is a walk-through "stone door," a place where the face of the plateau escarpment is breached and can be traversed easily on foot; we have noted these stone door features commonly near bluff top rock art sites, suggesting that access and passage was an important determinant of rock art site location. Also close by, sheltered against the bluff where water seeps down the face, a stone box and iron barrel hoops bear witness to the post-contact presence of a whiskey still.

The second Cumberland Plateau rock art site we will discuss is a little more distinctive in its context than the first, given what we have seen in Tennessee. For reasons that will become clear, we will refer to this site as the Horned Dog Arch Pictographs. First of all, with a few exceptions in southern Kentucky (e.g., (Simek et al. 2019), Horned Dog Arch

FIGURE 7. View of the Horned Dog Arch in late 2010. Note the icicles hanging through the window in the rock at right. Looter piles and pits are visible under the arch. The pictographs are on the ceiling above Simek's head.

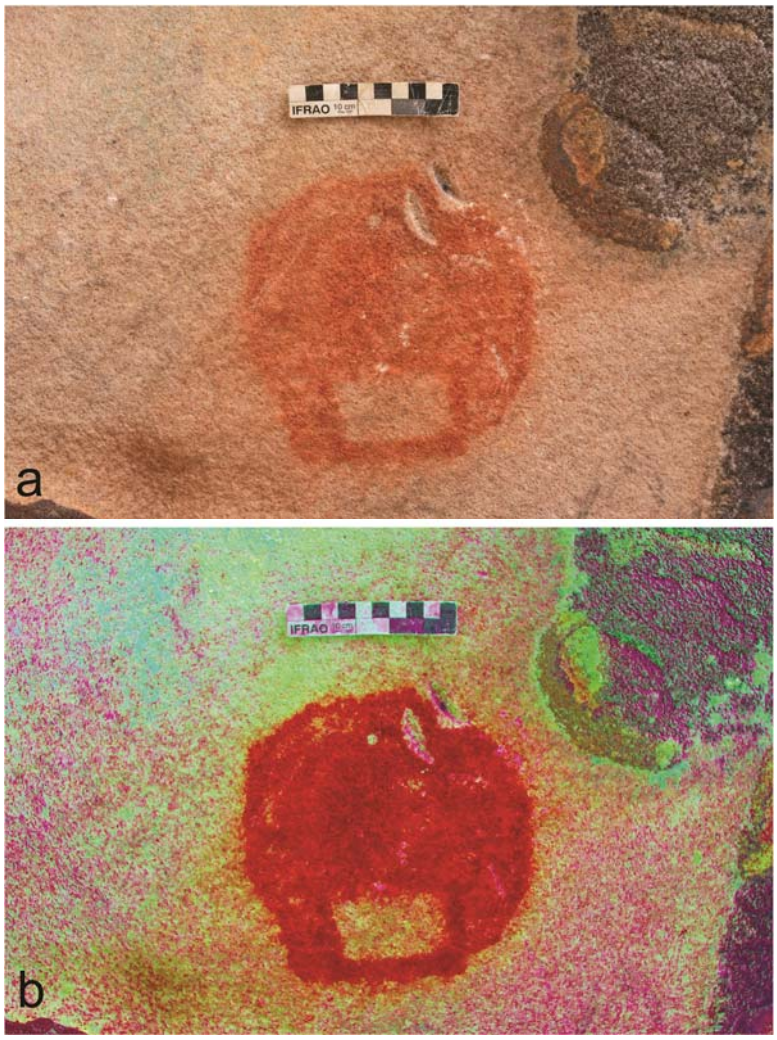

FIGURE 8. Red painted circle from Horned Dog Arch with rectangular hole at one side. a: raw photograph of the sandstone surface containing the glyph; b: same photograph processed using *Dstretch*® LRE color enhancement.

represents one of the northernmost pictograph sites we have recorded, located as it is in the North Cumberland Plateau. Second, this is only the second rock art site we know of that employs one of the Plateau's most signatory landforms, a sandstone arch, as the support surface for artwork. The arch is formed high on the plateau (about 1720 ft amsl) at the edge of the uppermost bluff line formed by outcropping Pennsylvanian sandstone cap rock. The area under the arch (about 30 m x 15 m by 2 m high) is protected, although a window at the south end exposes the inner area to the elements (Figure 7). The open side of the arch faces north.

The art itself comprises a pair of red pictographs similar to many others up and down the Plateau (Simek, Cressler, Hermann, and Sherwood 2013; Simek et al. 2018). These are on the ceiling under the arching overhang, one a complex quadruped, the other a solid circle. The circular glyph is almost completely filled with pigment (Figure 8a), and when it is enhanced by *D-stretch*®, it is clear that the pigment was evenly applied over the interior except for a well-defined

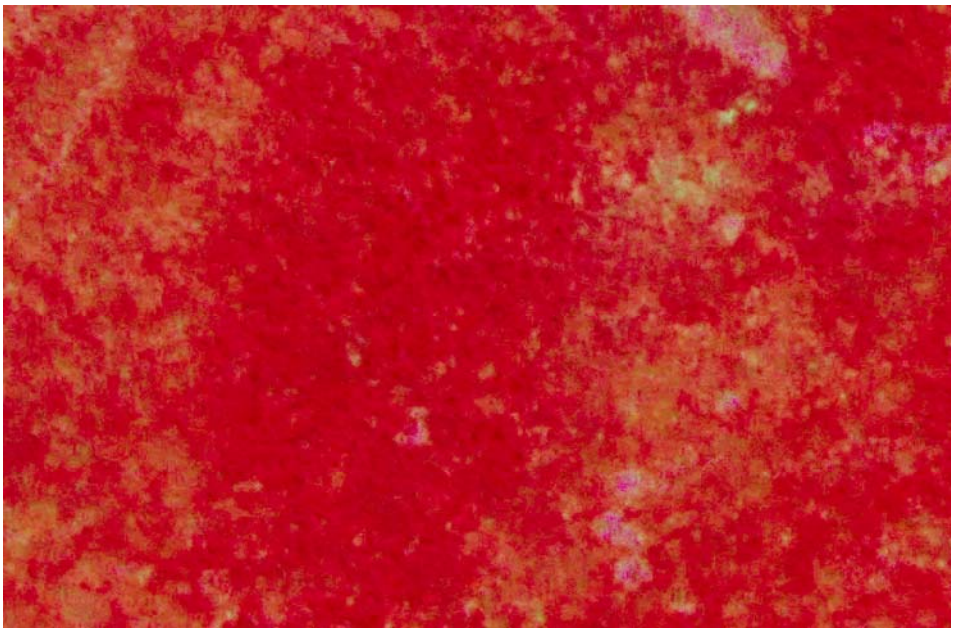

FIGURE 9. Closeup of enhanced photograph of paint composing the circle shown in Figure 8. Note how the color indurates the surface and interstices of the rock surface, indicating the paint was applied in liquid form.

rectangular area at one side of the circle (Figure 8b). Here, the rectangle was outlined in pigment and left intentionally blank. Note how the color indurates the interstices of the sandstone, indicating the pigment was applied as a liquid paint, not as a dry pencil, and is characteristic of both Horned Dog Arch images (Figure 9). The second pictograph is of a quadruped (Figure 10). In the enhanced view (Figure 10b), several interesting characteristics of this creature emerge, all suggesting that this is a supernatural animal. The rounded head has a long snout and a round eye positioned laterally on the face. There are horns, not antlers, so this is not a deer. The feet have curved talons, and the tail, lined with projections or hair is folded upwards. On the inside of the body is a curvilinear shape that begins with an oval near the quadruped's neck and ends in the body cavity with a coiling or spiraling line. It resembles a coiled serpent with its tongue extended on the interior of, or superimposed over, the quadruped. There is precedence for superimposed animal effigies in southeastern rock art; Figure 11 shows the profile of a woodpecker head positioned inside a raptor effigy from 51st Unnamed Cave in East Tennessee. We suggest that the Horned Dog creature is actually a form of supernatural canine. The similarity between the figure we consider here and a number of quadrupeds from 60th Unnamed Cave in southeast Tennessee is striking (Figure 12): horned heads or perked ears, elongated snouts, talon feet, and bushy tails over the back. We have argued elsewhere (Simek et al. 2019) that the pack behavior and the fact that they appear to be hunting another animal in 60th Unnamed Cave makes a canine effigy interpretation likely. That this pictograph shares so many characteristics with the cave dogs leads us to suggest a similar interpretation. The belly snake is a new, but still supernatural, twist. Thus "Horned Dog Arch Pictographs."

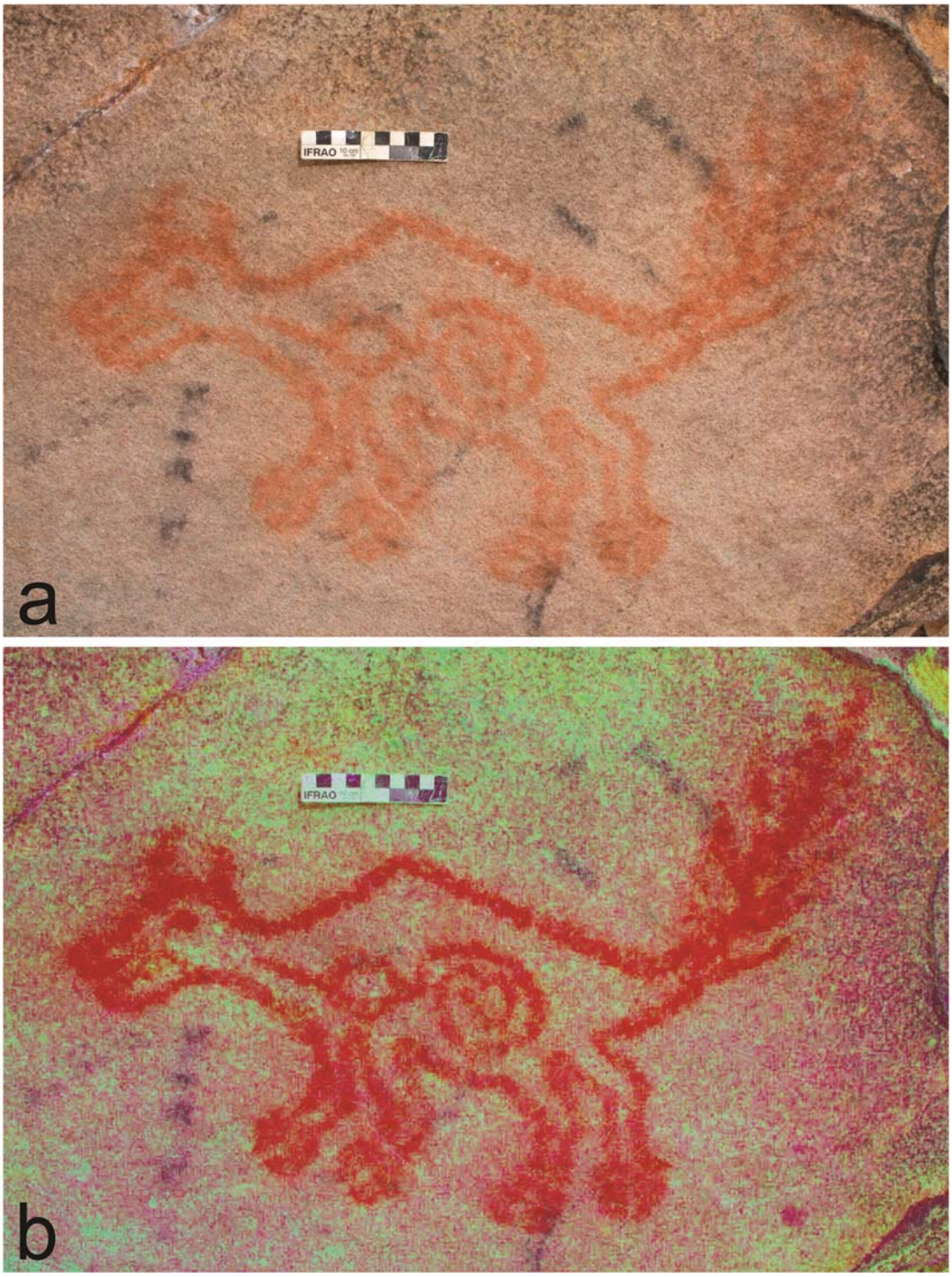

FIGURE 10. Red painted quadruped from Horned Dog Arch. The creature has perked ears or horns, a spiked tail, and curving talons for feet. Inside the quadruped's torso is a coiled serpent with a wide head and its tongue extended. a: raw photograph of the sandstone surface containing the glyph; b: same photograph processed using *Dstretch*® LRE color enhancement.

FIGURE 11. Petroglyph of a woodpecker head inside a raptor head from 51st Unnamed Cave, Tennessee.

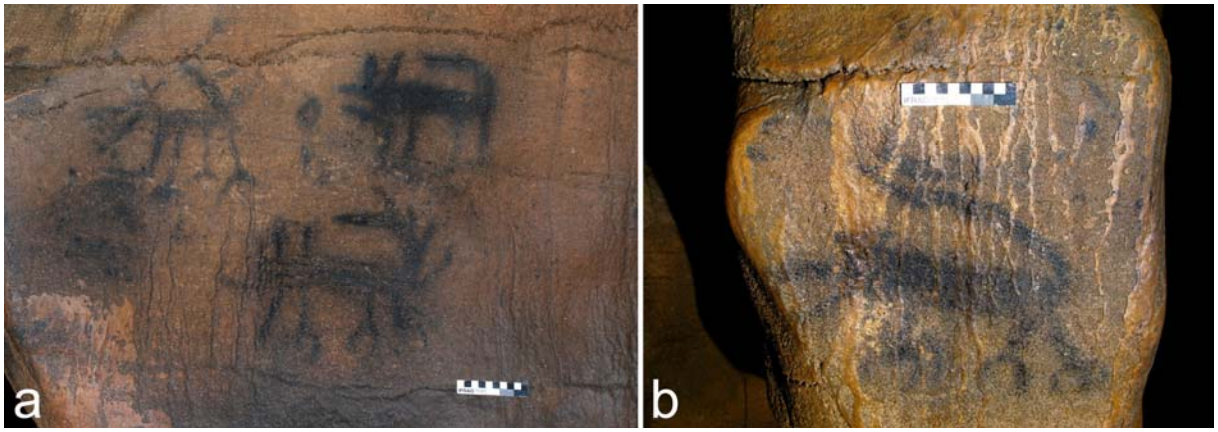

FIGURE 12. Quadruped pictographs, probably canids, from 60th Unnamed Cave, Tennessee. Note spiked tails, curving talons, and perked ears (Simek and Cressler 2008). a: panel of three canids; b: isolated quadruped image.

NOTE: The following chemical analyses were performed in 2014 and 2017. We have added them to our 2010 description here since they are directly relevant to the earlier presentation.

In 2012, CART purchased a portable x-ray florescence spectrometer that allows for non-invasive in situ assessment of pre-contact paint composition. A newer instrument was acquired in 2016. In January of 2014 and again in 2017, we took these instruments to the Horned Dog Arch to identify the components of prehistoric paints at the site. To examine the paint constituents of the images, we used a Tracer III-V+ (2014) and a Tracer III-SD (2017), devices manufactured by the Bruker Company. Both are handheld energy-dispersive instruments with silicon detectors that allow for the determination of multiple elements simultaneously within a sample. The Tracer III-V+ was used during the 2014 visit and two primary instrumental settings were used. The first was at 15kV, 35μA in conjunction with a vacuum pump attachment and a titanium filter to acquire low-Z elements on the periodic table. These settings allow X-rays from 3 to 12keV to reach the sample in order to analyze elements from Al to Fe on the periodic table (https://www.ptable.com/). A second instrument setting was used to acquire readings for heavier elements higher on the periodic table. The instrument was set at 40kV and 30μA with a copper/titanium/aluminum filter. No vacuum pump attachment was used for this setting. This setting excites elements from Fe to Mo on the periodic table. We obtained multiple readings on both the art and bare rock substrate at the site. During our 2017 visit, instrumental settings on the Tracer III-SD were optimized at 40kV, 11μA with a vacuum pump attachment to obtain a range of elements across the periodic table from Al to U.

To acquire accurate readings the instrument was always attached to a tripod with an extending arm, which provided stability during data collection. All PXRF readings were analyzed for 180 seconds.

We took readings on the best possible location on the pictographs. No pretreatment was applied to the area before the assay, making our analysis completely non-invasive. In addition to analyzing both red pictographs, we also took several control readings of the bare unpainted rock surface and one reading from an adjacent black charcoal image that we believed was recent. Although the instrument identifies the composition of the surface layer (paint) with greater sensitivity than the bulk (rock substrate), a variety of factors can influence the penetration depth of X-rays. Thus, substrate control readings are necessary to tease out the true paint constituents of the pictographs.

To determine the composition of the pictographs, we used a two-pronged approach. First, all spectra produced by the instruments were qualitatively examined, and elements that were present were identified. Second, a semi-quantitative spectral evaluation was conducted by converting spectra using Bayesian Deconvolution to Net Peak Area (NPA) estimates of the elements present in the analyzed specimen. These were then used to compare elemental concentrations and variability between the pictographs and rock controls analyzed.

We analyzed both red pictographs at the site as well as one black image, and three areas of the bare, unpainted rock (e.g., Figure 13). Elements identified in the red paint and bare rock include Al, Si, P, S, K, Ca, Ti, Fe, Cu, Zn, Rb, Sr, Zr, and Ba. Other elements identified in the spectra include Ar, Ni, Rh, and Pd; these elements, however, are inherent to the instrument rather than reflective of the chemical

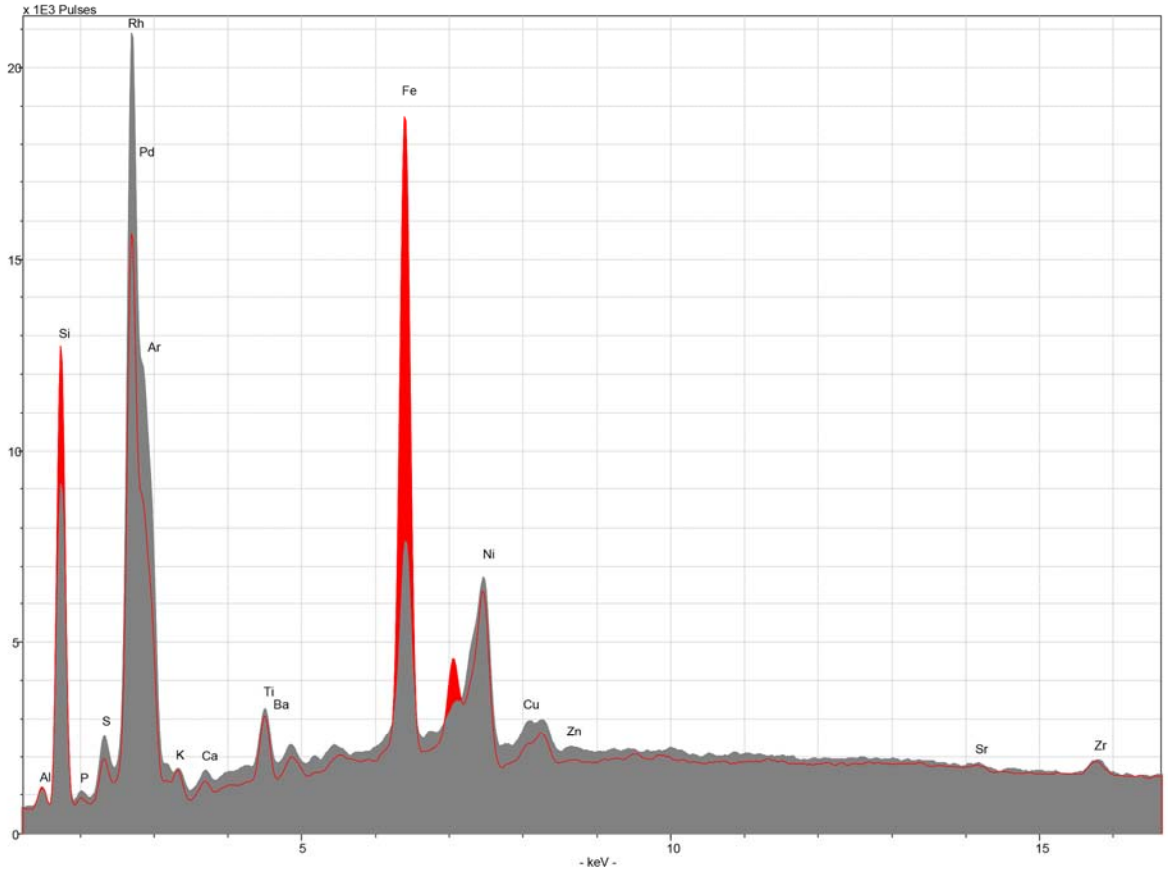

FIGURE 13. Spectral overlay of PXRF analyses at the Horned Dog Arch. These spectra were produced by analyzing the red disk pictograph (dark red shaded area) and sandstone control readings (gray shaded area). Areas where the red spectrum differs from the gray are elements that enrich the pigment.

makeup of the targets being analyzed. The black paint we analyzed, a small filled dot, contains the same elements; the addition of Cr, however, suggests this image was created using a modern paint. This is not surprising given the graffiti of "April" in black paint near these images. The only other noticeable difference in the spectra is in the amount of Fe. The red pictographs contain more Fe, while the bare rock contains less. Thus, the red paint at Horned Dog Arch had iron, likely ochre, as the principal color agent.

The pre-contact pictographs at the Horn Dog Pictograph site were created by artisans using a technically simple recipe that comprised a primary chromophore of an iron-rich ochre. This chromophore was added to a liquid medium, likely water, to produce a fluid paint that could then be applied to the rock surface. This basic recipe has been observed from a range of pre-contact painted media across the Southeast including rock art, statuary, and painted ceramic vessels (Bow 2012, 2020; Simek and Bow 2012; Simek et al. 2012; Simek et al. in press).

The sediment below the arch has been heavily looted, as was a small rockshelter just to the west along the bluff. Lithic debris is abundant in both shelters, but we saw no ceramics, although snow and ice made

FIGURE 14. Projectile points found in Horned Dog Arch looter tailings. a: large stemmed point that may be Woodland (Steuben Expanding Stemmed or Baker's Creek) or possibly late Archaic; b: broken base of a stemmed point, probably a Woodland Copena type.

surface visibility less than ideal. Nevertheless, in a low area at the east edge of the arch overhang, under a breakdown block, we found two projectile points (Figure 14). It is likely that these were in secondary position given their interest to looters and location on the surface. One is the broken base of a stemmed point, probably a Woodland Copena type. The other is a complete large stemmed point that may also be Woodland (Steuben Expanding Stemmed or Baker's Creek) or possibly late Archaic. Thus, the Horned Dog Pictographs are remarkable in their location and subject matter, but they do share basic characteristics with other Plateau open-air pictograph sites.

The final rock art locality investigated in 2010 is one that unlike any we have seen before, but that may be pivotal to understanding rock art in the Southeast. The site is located in northern Georgia not far from the Tennessee state line, on the

FIGURE 15. Edge of rock town formation on Lookout Mountain in North Georgia. Large sandstone boulders detach and slide over underlying shale deposit producing massive boulder jumble. Spaces and voids of varying sizes occur between major blocks.

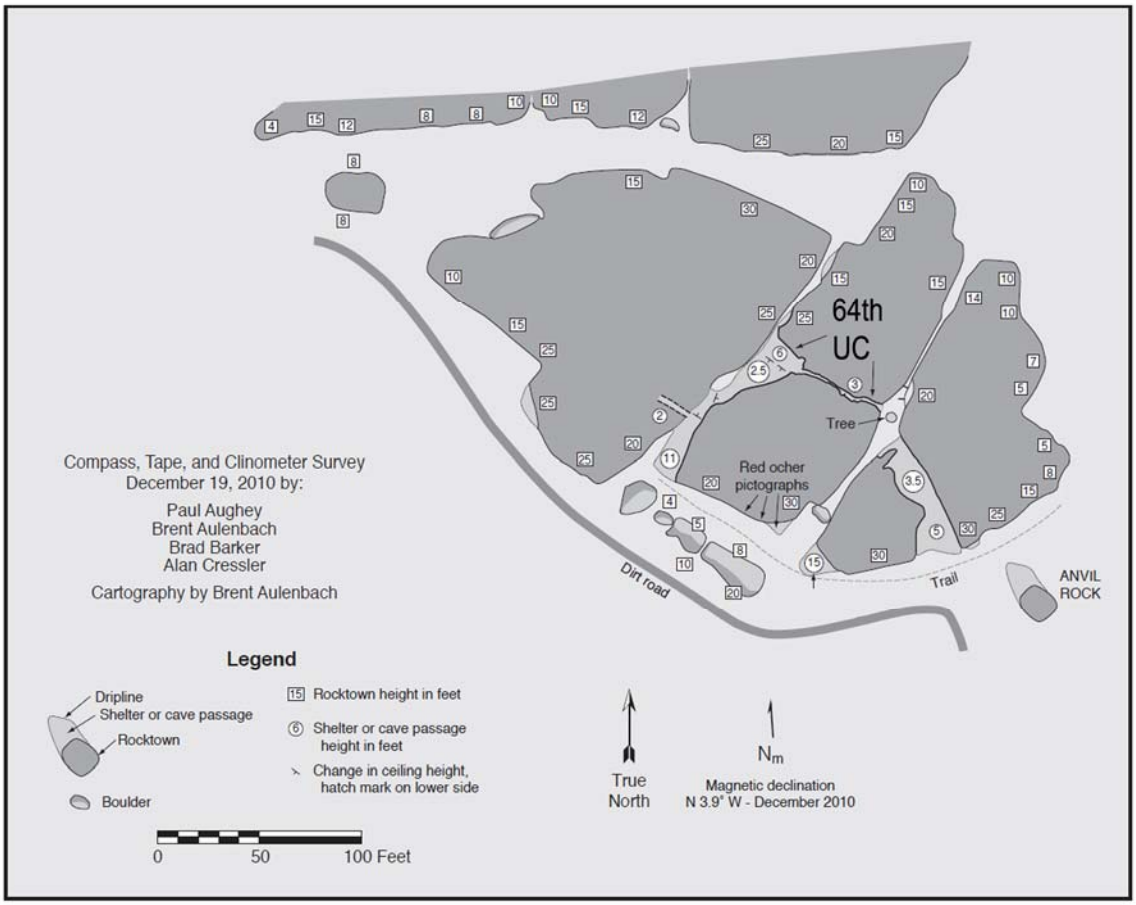

FIGURE 16. Map of rock town discussed in text. Location of 64th Unnamed Cave, red pictographs on outer edges of sandstone blocks, and a tree within the boulders are indicated. Drawing by Brent Aulenbach.

spine of Lookout Mountain at 1700 ft amsl. The site is comprised of several diverse rock art localities, all within a geologic feature colloquially called a “rock town.” A rock town was produced when Pennsylvanian sandstone cap rock was exposed by erosion and slid over underlying shale deposits pushed by gravity, fracturing and separating down slope as it moved (Figure 15). The result is a massive boulder jumble, some elements larger than houses, with narrow crevices and passages winding between and among towering rock walls; the feeling is sometimes like being in a cave with an open roof. Rock towns typically are located high on the Plateau escarpment, in sandstone outcrops where solutional caves are rare. In Georgia and Tennessee, these have become a favorite haunt for rattlesnakes, rock climbers, and tourists. The rock town of concern here is relatively small (Figure 16), composed of a limited number of large boulders. The rocks are very large, varying from over 30 m to more than 75 m in maximum dimension. The outer edge of the feature presents as shear walls of sandstone all the way around—a bluff more than 10 m high in some places —while in the cracks are passages and erosion caves that have formed along the boulder planes. Two of these, both on the inside of the rock town (including 64th Unnamed Cave), have dark zones. Thus,

FIGURE 17. Entrance to 64th Unnamed Cave inside rock town. Black serpent pictograph is illuminated on right.

both caves and sandstone bluffs are present in the same place at the very top of the Cumberland Plateau escarpment.

The prehistoric components in this rock town were first discovered by Alan Cressler on October 7, 2010. During his first visit, Cressler identified a number of black charcoal pictographs inside the deepest of the small dark zone caves inside the rock mass (Figure 17). He also saw low rock walls inside the cave that could be of prehistoric manufacture (Figure 18), along with intentionally constructed flat rock platforms or "tables." At several other points inside the rock town, Cressler found other black pictographs, some that appeared to have subject matter more similar to historic than prehistoric rock art themes and were produced with distinctive pigment. A few days later, on October 17, Cressler returned to the site with Simek, and documentation was initiated. During that visit, both black and gray pictographs were observed and documented inside 64th Unnamed Cave and in adjacent crevices within the boulder mass. As will be seen, other rock art was observed outside 64th Unnamed Cave. Mapping surveys of the rock town were carried out by teams of cavers led by Brent Aulenbach in November and December of 2010 (see Figures 16 and 18). No artifact collection or excavation was undertaken.

Altogether, we have catalogued fifteen black pictographs in and adjacent to 64th Unnamed Cave, a number of which have

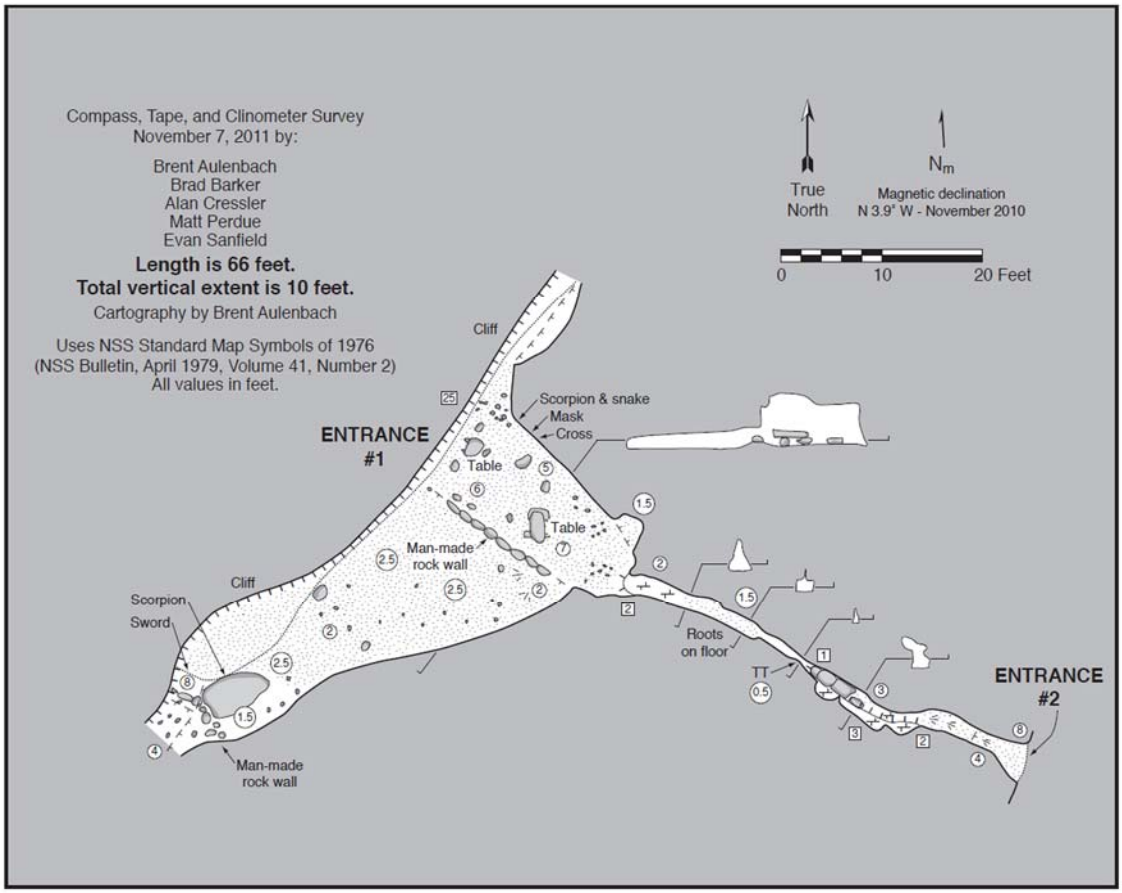

FIGURE 18. Map of 64th Unnamed Cave. Locations of some pictographs and constructed rock features inside cave are indicated. Drawing by Brent Aulenbach.

imagery consistent with what we have seen in other prehistoric cave art sites. Some of the glyphs are problematic. A number of pictographs are particularly striking (Figure 19), including a unique group of images depicting what we believe are scorpions (Figure 19a). These latter figures are presumably the native Plain Eastern Stripeless Scorpion (*Vaejovis carolinianus*); in all cases, the front appendages are emphasized, and the bodies are clearly segmented. Segmented tails curl over the back, and eight legs, appropriate for an arachnid, are depicted. Scorpion images appear in several places within the cave. There is also a serpent pictograph in the dark zone (Figure 19b), and this is consistent with what we have seen in other prehistoric cave art sites. Drawn in black pigment, it has an extended (not coiled) body and an open mouth as if in the process of striking or eating. The image, while a simple silhouette, is sure and vibrant. Another segmented character matches an amorphous segmented body with no limbs to a head with two round eyes and an open mouth, resembling more than anything a human face or cranium (Figure 20). There are several open air examples of similar faces at Painted Bluff in Alabama (Simek et al. in press). The remaining dark zone pictographs in 64th Unnamed Cave comprise geometric shapes or a few line segments, signs that we see often in caves but that are indeterminate as to meaning, chronology or culture. All of the cave

FIGURE 19. Black pictographs from 64th Unnamed Cave. a: two of at least four scorpion images; b: serpent with open mouth.

paintings listed so far are black and appear to have been applied as liquid paint.

There are three pictographs in 64th Unnamed Cave that are problematic, including a face, an asymmetrical cross resembling a Christian symbol, and a long weapon-like form that might be a bi-lobed arrow but that might also be a sword with circular elements on the guard (Figure 21). All three of these pictographs are located close together within the rock town. They were produced with a gray colored material that, unlike the other pictographs we have described, appears to have been applied as a dry power. They are markedly fresher and less indurate in the rock surface than the serpent, scorpions, and skull-face. The material most closely resembles recent ash, as if just extracted from an extinguished fireplace. In the end, pigment chemistry and perhaps direct ^{14}C dating may be required to authenticate all of these pictographs. We intend to pursue all these analyses in the future.

The black pictographs inside 64th Unnamed Cave are not the only rock art at this rock town. Along at least one expanse of outer wall, in the open air as if on a bluff face, red pictographs are present, although these are much weathered and difficult to discern (Figure 22). Geometric shapes, cross-hatching, and latticework comprise

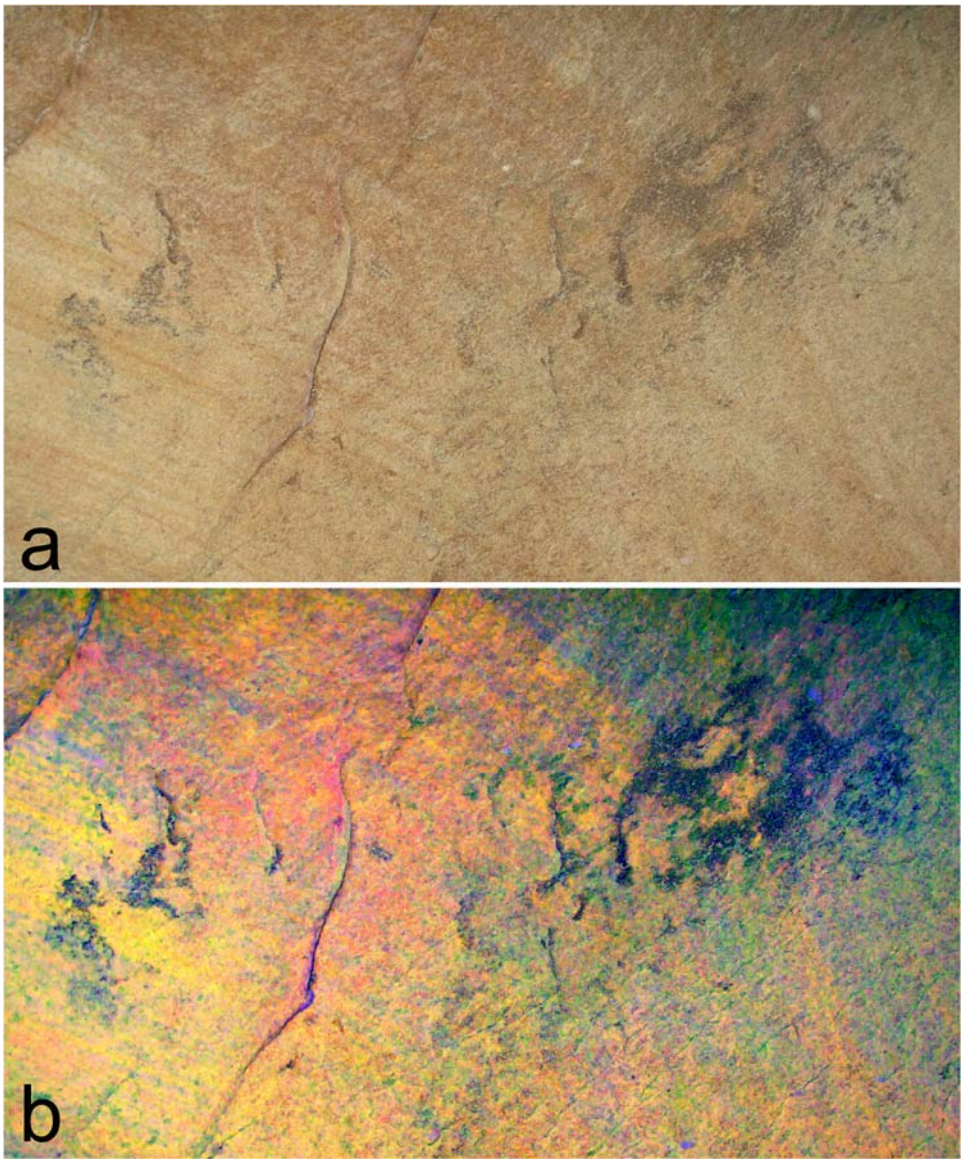

FIGURE 20. Black mask-like anthropomorph face with traces of further painting to left of head from 64th Unnamed Cave. a: raw photograph of the sandstone surface containing the glyph; b: same photograph processed using *Dstretch*® YBK color enhancement.

the visible designs. Dense and more complex elements are present in sheltered areas of the rock surface, suggesting that more elaborate drawings were once present that are now eroded. Again, these designs resemble pictographs from Tennessee and Alabama.

In the various caves and shelters of the rock town, a few artifacts were observed, including sand tempered ceramics and stemmed projectile points, all suggesting a Woodland presence at the locality. These were concealed *in situ* if too exposed, but none were disturbed from their locations.

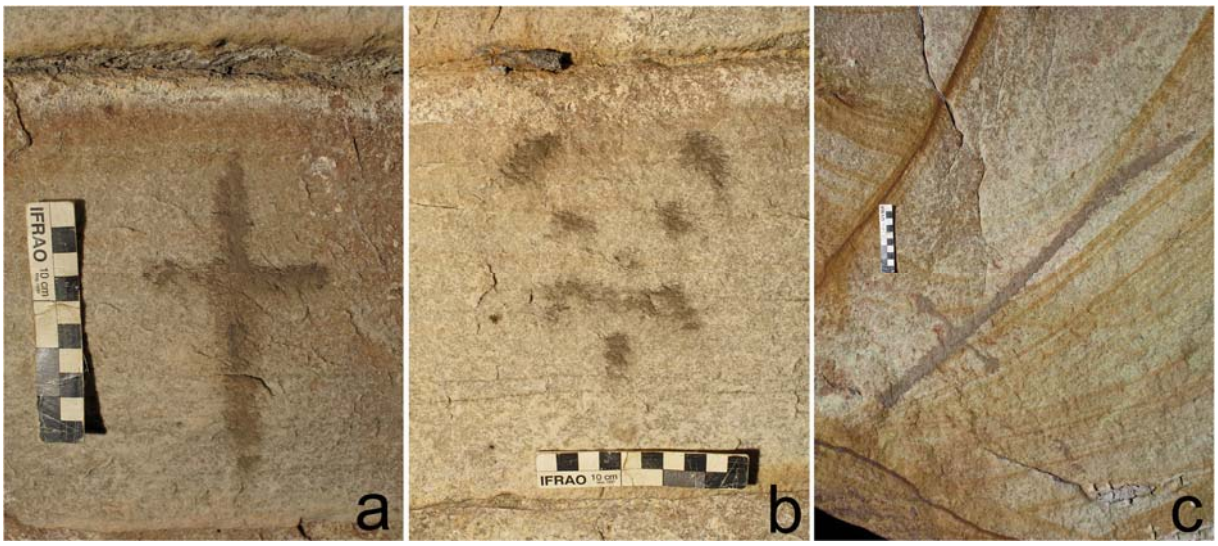

FIGURE 21. Three gray ash pictographs from 64th Unnamed Cave that are probably historic in origin. Note the difference in pigment color and texture from the pre-contact images shown in preceding figures. a: crossed lines; b: human face; b: sword.

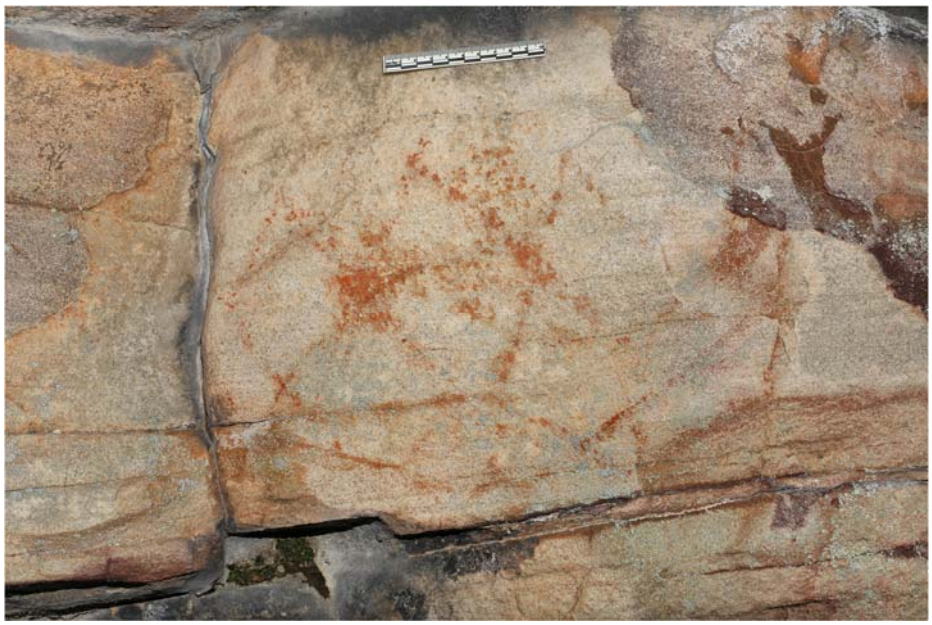

FIGURE 22. Red geometric pictographs from outer wall of rock town.

FIGURE 23. Large tree growing out of rock town from base level near 64th Unnamed Cave to open air above the tops of the largest boulders. This tree is surely too young to have been there in the pre-contact period, but other trees were probably there in earlier times.

This remarkable site is the first we have seen where both red and black pictographs co-occur, so we will speculate as to its meaning. First, while both colors are present, they do not appear together. Instead, black pictographs are found in a cave, while red pictographs occur outside, on the open exterior face of the rock. Those who have followed our work in recent years (Simek et al. 2012; Simek, Cressler and Herrmann 2013; Simek, Cressler, Hermann, and Sherwood 2013; Simek et al. 2018) will know that this dichotomy is general; open air pictographs are found high in the cap rock bluffs of the Cumberland Plateau, and are red. Cave

FIGURE 24. Rock town at Rock City on Lookout Mountain south of Chattanooga, Tennessee. Note that passages have been paved for visitor traffic.

pictographs are low down on the Plateau (even though caves are available at various elevations) and black. We have argued that this reflects a cosmological model that is physically mapped onto the natural landscape, comprising celestial elements (elevated and associated with life forces, thus red) and underworld elements (in caves and associated with death and transformation, thus black). The landscape was thus transformed to reflect ideology. Southeastern native religion postulated a tiered universe (Hudson 1984), but all layers were permeable at the boundaries and ultimately connected by a single powerful spanning element, a tree (Lankford 2007).

We suggest that the significance of this rock town site, bearing physical and symbolic representations of multiple levels in a single place, is the connectivity it affords. In rock towns we find trees where the trunks grow out of the underworld (Figure 23), through the middle world, and into the sky. These sites are thus microcosms of the structure of the cosmos; if this interpretation is true, they are powerful places, indeed. And there are

FIGURE 25. Magical occupants of Rock City.

more of these geological features in Georgia and Tennessee, the most famous of which, Rock City near Chattanooga, has drawn tourists for many years (Figure 24). And as modern landscape art in Tennessee is quick to tell us, once you "See Rock City," you know there are strange, powerful, and wonderful things in the mountain there, too (Figure 25).

In sum, 2010 was another productive year for the discovery of Tennessee prehistoric rock art, even with a more limited amount of time devoted to that activity. It was clear earlier in our work that red pictograph sites are probably quite numerous in our area (Simek et al. 2019), and the discovery of three more such sites in 2010 adds to the corpus of this rock art type. Red pictographs are especially common in the central and southeastern part of the state, and we think we may soon be able to predict their locations. They also extend into neighboring Georgia and Alabama, and we have seen red pictographs in Kentucky as well (Simek et al. 2019). 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.

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