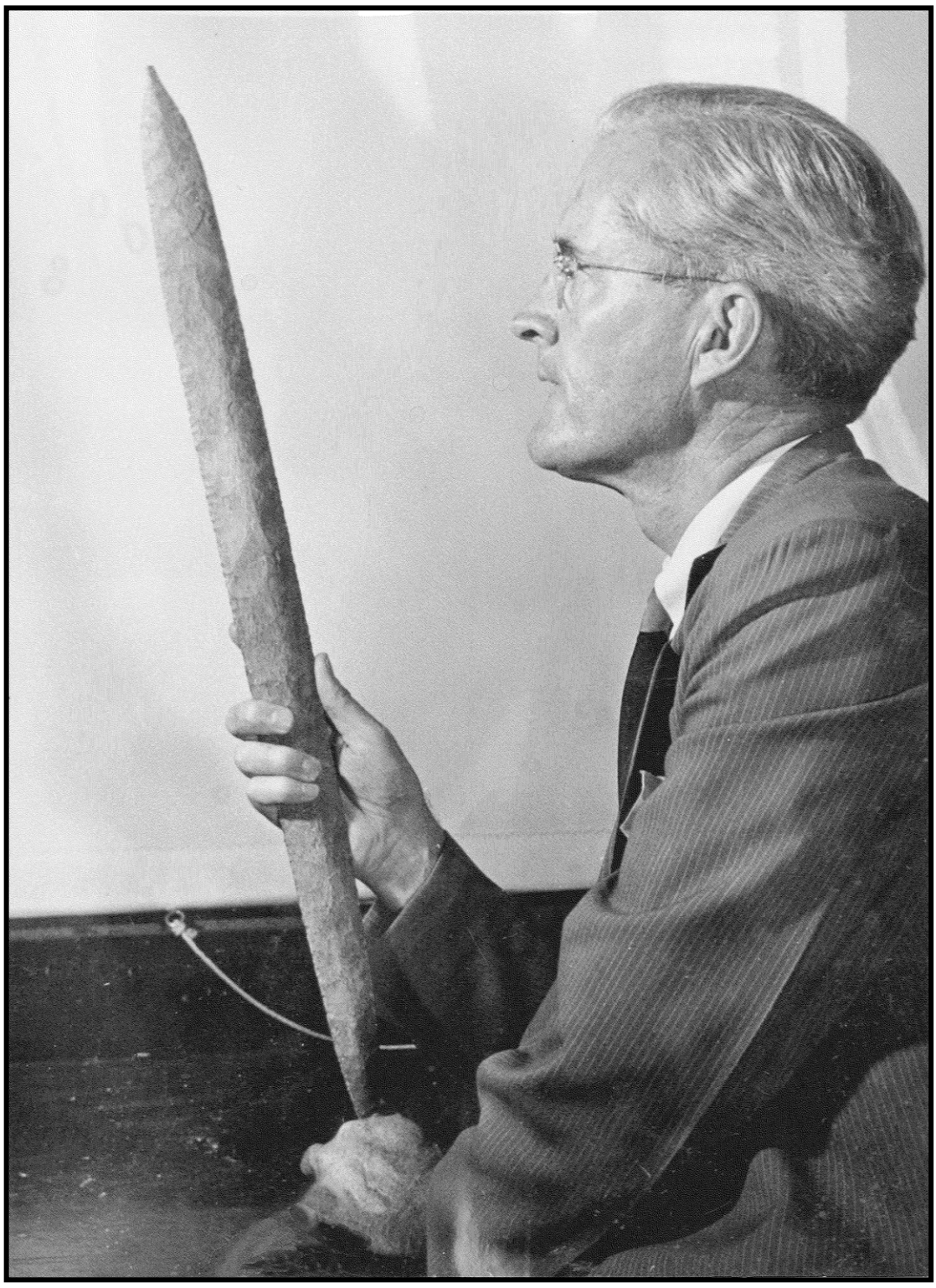
TENNESSEE ARCHAEOLOGY

Volume 7 Winter 2015 Number 2



Tennessee Archaeology is published semi-annually in electronic print format by the Tennessee Council for Professional Archaeology.

Correspondence about manuscripts for the journal should be addressed to Michael C. Moore, Tennessee Division of Archaeology, Cole Building #3, 1216 Foster Avenue, Nashville TN 37243.

TENNESSEE ARCHAEOLOGY

VOLUME 7 Winter 2015 NUMBER 2

On the Cover: Thomas M.N. Lewis with a "sword" from the Duck River Cache (*Courtesy and by permission of Nancy Ladd, Lewis' daughter, via Marlin Hawley and David Dye)*.

EDITORS CORNER

Welcome to the second issue of *Tennessee Archaeology* in our seventh volume which includes articles and research reports concerning archaeological and geophysical investigations at Civil War Fort Donelson and the first thorough biography of founding Tennessee archaeologist Thomas M.N. Lewis. We have also added a new section to the journal with this issue – Avocational Contributions – to facilitate incorporation of the important contributions of non-professionals. John Dowd presents the available information on the otherwise undocumented "digging" of an important cave site in 1969-1970. As always, we appreciate the contributions of the authors and extend our thanks to the reviewers who help make this peer-reviewed e-journal possible. We report several items of note on activities in Tennessee archaeology since our last Editors Corner.

FIGURE 1. Jared Barrett at the "Sandy Homecoming" event on 26 Sep 2014 (*Kevin E. Smith*).

A great deal of positive publicity was generated over the past year when the iconic Mississippian stone statue from the Sellars Mound site (40WI1) traditionally known as "Sandy" was elevated to the position of Tennessee's first official State Artifact. The idea was proposed by archaeologist Jared Barrett (TRC Inc.) and adopted as a project of the Tennessee Council for Professional Archaeology. The successful bills were sponsored by Representative Mark Pody, Senator Mae Beavers, and Senator Bill Ketron and signed into law on March 21, 2014. Tennessee joins only a handful of other states that have designated official State Artifacts. Our state artifact was previously honored by inclusion as one of only ten objects selected for the US Postal Service stamps celebrating the opening of the Smithsonian's National Museum of the American Indian (see "Editors Corner," *Tennessee Archaeology* 1(2):69-70).

Another project that stayed in the headlines for much of 2014 was the rediscovery early in the year of portions of the Mississippian-era salt manufacturing site in downtown Nashville. During construction of the new baseball stadium for the Nashville Sounds near Bicentennial Mall State Park, a small intact portion of the "Sulphur Dell" site (40DV5) was uncovered and salvaged – producing the first modern archaeological data about this important local prehistoric industry. Although long recognized as an important component of local Mississippian culture centering on the massive mineral spring, the site has been

FIGURE 2. Profile of a large rim sherd of a Mississippian "salt pan" from Sulphur Dell (*Kevin E. Smith*).

deeply buried and largely inaccessible under many feet of late nineteenth and early twentieth century landfill. To recognize this significant discovery, the city of Nashville is sponsoring a new permanent exhibit at the Tennessee State Museum tentatively planned to open sometime in 2015. In addition, interpretation of the importance of the Sulphur Spring Bottoms in the prehistory and early history of Nashville is planned along the greenway system adjacent to the new stadium.

In 2012, the Southeastern Archaeological Conference (SEAC) established the Patty Jo Watson Award for best article or book chapter on Southeastern Archaeology. Patty Jo Watson, a renowned American archaeologist who has worked extensively on the pre-Columbian Southeastern United States, not only set new standards in the practice of archaeology, but is also one of America's best regarded scientists. This award honors her vast contributions to Southeastern archaeology. The first award, presented at the 2014 Southeastern Archaeological Conference went to Professor Jan Simek (University of Tennessee), Alan Cressler (US Geological Survey), and Nicholas Herrmann (Mississippi State University) for their article "Prehistoric Rock Art from Painted Bluff and the Landscape of North Alabama Rock Art" published in the journal *Southeastern Archaeology* in 2013. Simek commented: "This is a great honor for us, especially since Pat Watson, an archaeologist and member of the National Academy, has been a role model and mentor in different ways to all three of the authors. Being the first recipients of an award named for a scholar who was always so supportive and encouraging of young archaeologists as they developed their careers, including us, is especially

FIGURE 3. Jan Simek, researching prehistoric rock art above the Tennessee River in Marshall County, Alabama (*Alan Cressler*).

gratifying" ("Professor Awarded for Prehistoric Rock Art Research," *Tennessee Today*, November 17, 2014).

From November 18-21, 2015, the Southeastern Archaeological Conference will convene in Nashville for only the second time in the seventy-two year history of the organization. The last meeting in Nashville (1986) was hosted by the Tennessee Division of Archaeology and featured a reception at the Tennessee State Museum highlighting the recently installed Gates P. Thruston Collection of Vanderbilt University -- the core of their permanent First Americans exhibit. This year, the meeting will be hosted by Middle Tennessee State University, the Tennessee Division of Archaeology, and the Tennessee Department of Transportation at the Doubletree by Hilton Downtown. In addition to a multitude of papers, posters, excursions and other events, the meeting is planned to include once again a reception at the Tennessee State Museum – this time highlighting the special exhibition "ANCESTORS: Native American Stone Statuary of Tennessee." The exhibition, curated by Rex Weeks, Kevin E. Smith, and Robert V. Sharp, will assemble over two dozen of the finest Mississippian era stone sculptures from Tennessee (including "Sandy"). While the meeting is still in the planning stages at the time of this writing, more details will be available at: http://www.southeasternarchaeology.org/annual-meeting/details/. In addition to the two meetings in Nashville, Tennesseans have hosted eight other SEAC meetings: Chattanooga (2001); Knoxville (1950, 1968, 1978, 1995, 2007), and Memphis (1973, 1982).

We also take this opportunity to recognize the passing of several valued colleagues over the past year, whose careers collectively represent almost a century and a half of archaeological contributions in Tennessee and elsewhere. We extend our condolences to their families, friends, and colleagues. They will all be missed.

FIGURE 4. Gary Lee Barker.

Gary Lee Barker (26 Aug 1961–28 Dec 2013) of Kingston Springs, Tennessee, age 52, passed away in late 2013 after a lengthy struggle with cancer. Born in England, Gary received an undergraduate degree in history from Louisiana Tech University in 1986. After relocating to Tennessee, he pursued a dream to become an archaeologist. In 1990, he was hired as a field technician at the Tennessee Division of Archaeology (TDOA) and worked on a series of projects, including the survey of Civil War sites in West Tennessee, Fort Blount, and at the Rutherford-Kizer mounds. In 1994, Gary moved to the Tennessee Department of Transportation (TDOT) as a staff archaeologist. Gary earned his master's degree in anthropology at Memphis State University in 1996, allowing his advancement to Archaeologist II with TDOT, a position he held for the remainder of his life. Although perhaps best known for his interests in the Paleoindian and Archaic periods with investigations at Austin Cave (40RB82) and Johnson (40DV400) sites among others, Gary also conducted substantial investigations of Mississippian sites, including Kellytown (40WM10) and the Brick Church Pike

Mounds (40DV39). Gary adopted the acquisition of the remaining portion of Kellytown for preservation as a crusade for the last several years of his life – working with the "Friends of Kellytown" group to promote that goal. Gary would undoubtedly have been pleased to know that less than a year after his passing, Mayor Karl Dean of Nashville announced the purchase of a 6.72-acre tract at Hillsboro Road and Old Hickory Boulevard in Nashville containing the Kellytown site. The site will be preserved as a city park and greenspace, with significant financial assistance from the Friends of Kellytown.

FIGURE 5. Gary Barker (center) volunteering during 1997 salvage archaeology at the Jarman site (*Tennessee Division of Archaeology*).

FIGURE 6. Mayor Karl Dean announcing the impending purchase of the Kellytown site, December 15, 2014 (*Kevin E. Smith*).

FIGURE 7. Chuck Bentz at the Townsend Project 1999-2000 (*Archaeological Research Laboratory, University of Tennessee*).

Charles “Chuck” Bentz, Jr., (16 Dec 1953–19 Apr 2014) of Knoxville, Tennessee passed away on 19 Apr 2014 at the age of 60 while doing fieldwork in North Dakota. Chuck received his bachelor’s degree in Anthropology from the University of Illinois, Chicago in 1976 and his masters in Anthropology at the University of Tennessee, Knoxville in 1986. During the 1970s, Chuck worked on a number of sites in Illinois, including Orendorf and Lohmann on the FAI-270 project. He subsequently relocated to Tennessee where he worked on the Columbia Reservoir (Tennessee Valley Authority) project while pursuing his graduate degree. After graduation, Chuck continued at the University of Tennessee running contract projects, eventually serving as director of the Archaeological Studies Group at the Center for Transportation Research at the university for many years. After leaving the Transportation Center in the early 2000s, Chuck continued to work as a consultant on projects for various cultural resource management firms. Although much of his work focused on East Tennessee, Chuck’s lengthy list of contract reports and other publications spans the length and breadth of the state and virtually every site type identified here. From his earliest experiences in Illinois and throughout the rest of his career, Chuck had a special interest in the important transformations during the Woodland period in the East.

FIGURE 8. Chuck Bentz directing excavations at the Lohmann site (11S49) in the American Bottom, Fall 1978 (*Photograph courtesy, Western Illinois University).*

FIGURE 9. Abigayle at the Natchez Bluffs project ca. 1982 (*Jay K. Johnson, University of Mississippi*).

Abigayle Robbins (3 May 1954–6 Aug 2014) passed away at the age of 60 in Brentwood, Tennessee with burial in the Whittaker Cemetery in her hometown of Monterey, Tennessee. Abigayle was a 1972 graduate of Monterey High School and received her bachelor's degree from the University of Tennessee, Knoxville in 1976. After graduation, Abigayle worked on a number of major contract projects throughout the southeast, including the Gordon Mounds and part of the Mud Island Creek archaeological complex on the Natchez Trace in Mississippi. She returned to Tennessee in the mid-1980s and worked as a contract archaeologist on several TDOA projects, including excavations at the Fernvale site in Williamson County. Soon thereafter, she joined the staff of DuVall & Associates, Inc., a private cultural resource management firm in Franklin, and participated on many survey and excavation projects during the late 1980s and 1990s, including many cemetery relocations across the state at sites such as Travellers Rest (40DV11), Brentwood Library (40WM210), and the Edgefield Benevolent Cemetery.

FIGURE 10. Abigayle explaining the project to visitors ca. 1982 (*Jay K. Johnson, University of Mississippi*).

FIGURE 11. Abigayle during a 1988 project at 40MT387 (*Tennessee Division of Archaeology*).

FIGURE 12. Howard Hoyle Earnest.

Dr. Howard Hoyle Earnest, Jr. (30 Jun 1951 – 24 Jul 2014), 63, of Bloomington, Illinois passed away on 24 Jul 2014 with burial in the Chuckey Cemetery in Chuckey, Tennessee. Born in Knoxville, Howard received his B.A. from the University of Tennessee, Knoxville in 1973, M.A. in Anthropology from Harvard University in 1975, and his Ph.D. in Anthropology from Harvard in 1999 as a student of Gordon Willey (with a fifteen year hiatus in his dissertation research at least partially due to the El Salvadoran Civil War). Although much of his fieldwork focused in Mexico, El Salvador, Honduras, and Bolivia, Howard also spent fifteen years as archaeologist with the United State Forest Service at Cherokee National Forest in southeast Tennessee, during which time he participated in the discovery of the first recognized prehistoric dark zone art cave in the southeast at Mud Glyph Cave. Recently, he returned to fieldwork in East Tennessee as a contributor on the on-going Illinois State University archaeological field school projects of his spouse, Dr. Kathryn Sampeck.

FIGURE 13. Howard at the Tellico Project in 1970 (*Nick Fielder*).

'NO TERMS BUT UNCONDITIONAL SURRENDER': ARCHAEOLOGICAL AND GEOPHYSICAL ASSESSMENT OF THE FORT DONELSON CONFEDERATE MONUMENT LANDSCAPE, STEWART COUNTY, TENNESSEE

Shawn M. Patch, Christopher T. Espenshade, Sarah Lowry, and Patrick Severts

Recent archaeological and geophysical work conducted around the Confederate Monument at Fort Donelson National Battlefield yielded significant information. An integrated approach was used that included close-interval shovel testing, intensive metal detecting, and ground penetrating radar (GPR). Results indicate a very high density of military artifacts and features in a narrowly confined area that witnessed major action during the Battle of Fort Donelson in 1862. Interpretations are offered regarding different phases before and after the battle and subsequent activities associated with monument construction in the 1930s, as well as an evaluation of the effectiveness of systematic, intensive metal detecting and the potential of geophysics on battlefield sites.

New South Associates conducted a detailed archaeological and geophysical assessment of the Confederate Monument landscape at Fort Donelson National Battlefield in Stewart County, Tennessee (Figures 1-3). The study was conducted on behalf of the National Park Service (NPS). The purpose of this paper is to discuss results of an integrated approach to battlefield landscape assessment using multiple methods on a small scale, including close interval shovel testing, intensive metal detecting, and ground penetrating radar survey. No professional archaeological work had been conducted prior to the current study and little was known of the area beyond historic accounts.

Historic Overview

Extensive research has been conducted on the history of Fort Donelson during the Civil War. The Cultural Landscape Report (Jaeger Company 2009) provides an overall summary of the Fort as well as an administrative history of the park and its current condition. For purposes of the current study, only a brief summary of the Battle of Fort Donelson is presented; greater detail is provided in Patch et al. (2012) and Knight (2011). Bearss (1959a-g) provides detailed mapping of unit locations.

In mid-February, 1862, the Confederates were desperately attempting to retain control of river traffic along the Cumberland River. The river was a major supply route, and the federal efforts in Tennessee would be bolstered if they could move equipage and personnel along the Cumberland. The Confederates considered Fort Donelson as their seat of power on the Cumberland. In mid-February, the complex included: Fort Donelson proper, an earthwork fort; water batteries that could fire on river traffic; and a partially completed outer line of defenses including infantry trenches and abatis (defensive obstacles formed by felled trees with sharpened branches facing the enemy). The battle occurred over five days, February 12-16, 1862.

FIGURE 1. Location of study area within Fort Donelson National Battlefield.

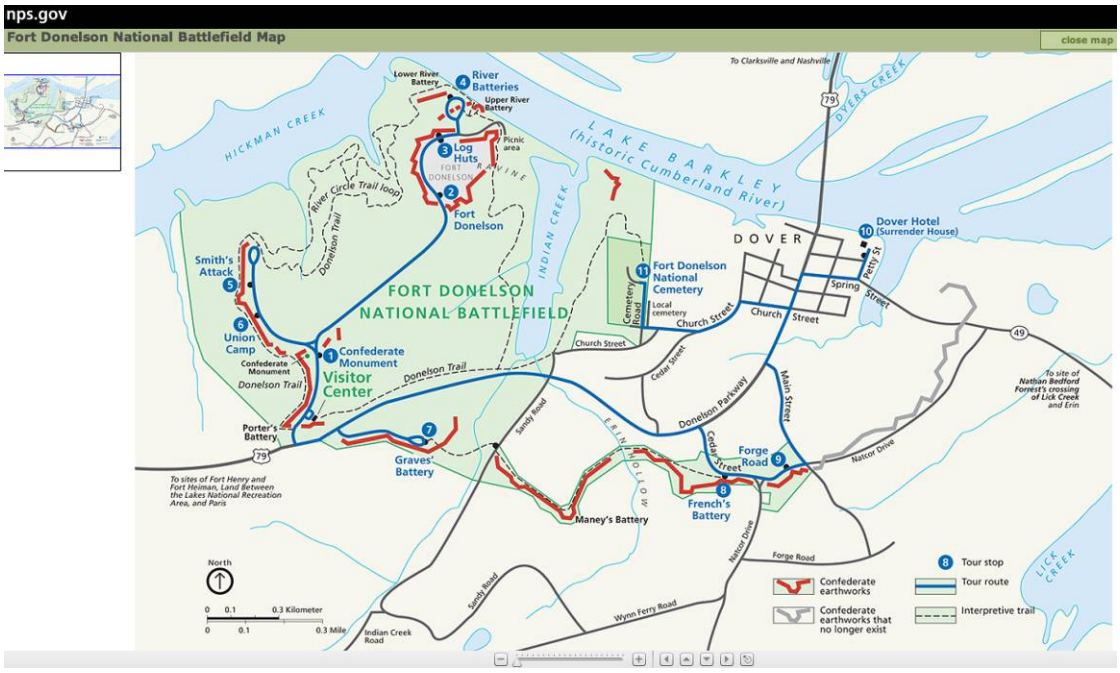


FIGURE 2. Location of study area (west of Point 1) relative to other park features.

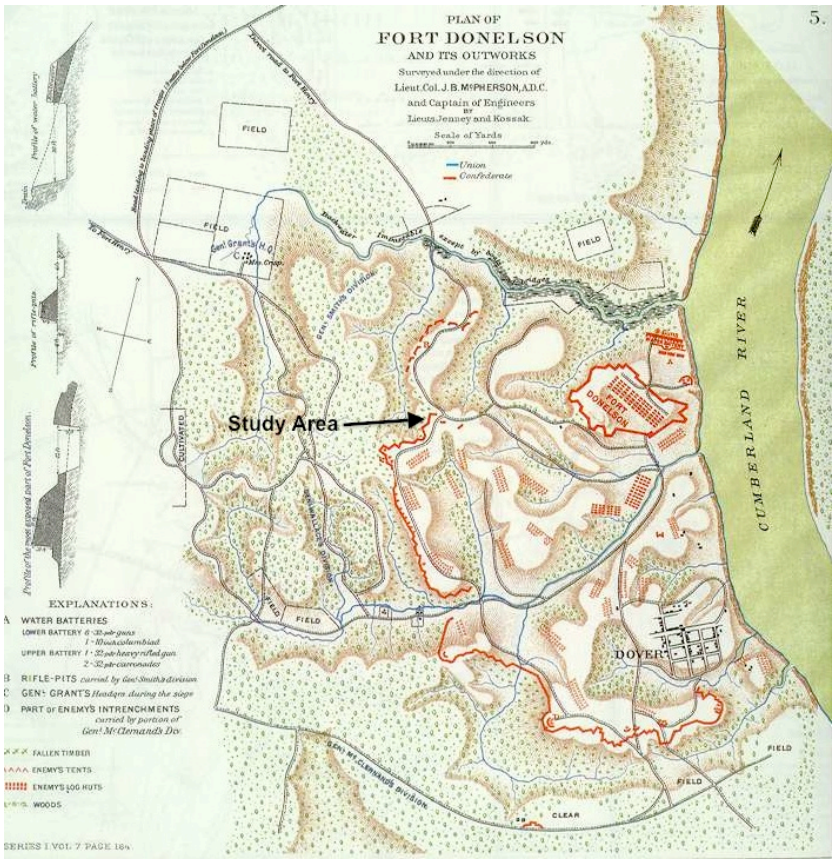


FIGURE 3. Location of study area on 1862 J.B. McPherson map (Official Records).

February 12. The Confederate States of America (CSA) continued to work on the outer defenses. The Union infantry formed in a broad arch paralleling the out defenses. Union gunboats tried to gauge the strength of the water batteries. On this date, the 18th Tennessee infantry (18th TN) was in place in the study area. At this juncture they were hard at work improving a series of rifle pits into an infantry trench.

February 13. In the morning, the Union gunboats bombarded Fort Donelson, and the water batteries returned fire. The Union infantry probed the Confederate lines to determine their strength. No advances were realized. For our project area, it is noted that three companies of the 18th TN were in the rifle pits, with the remainder in reserve. It is not clear where exactly the camp(s) of the 18th TN were located on February 12 and 13, but it is likely that there were at least small advance camps almost directly behind the earthworks (i.e., in the study area).

February 14. The six Union gunboats and the water batteries again exchanged fire, with the heavily damaged gunboats retreating. While the river salvos were in progress, the Confederates attempted a breakout, having realized that Union troops continued to arrive and the Confederates would soon be heavily outmanned. The breakout failed due to leadership issues, and the Confederates returned to the outer defenses. By February 14, the opposition had arrived and arranged itself. The 14th Missouri Infantry (14th MO), 12th Iowa Infantry, and 50th Illinois Infantry (50th IL) were to the west of and opposite the 18th TN, who were in the study area.

February 15. The Confederates again attempted a breakout, and were successful in clearing an escape route. However, General Gideon Pillow thought he had the opportunity to smash Grant's army, and Pillow lost sight of his mission. By the end of the day, the Confederates were back in the outer defenses. During the breakout, the Union infantry correctly surmised that the Confederate right was weakly defended. After a difficult fight, the Union took and reversed the outer defenses on the Confederate right. At daybreak on February 15, the 18th TN was moved to the far left of the outer works as an element of an attempted break out. In their absence, the 30th Tennessee Infantry Regiment (30th TN) controlled the segment of the outworks including the study area. By 2:15 on February 15, the 30th TN and a two-gun battery (part of Grave's Battery, but far from the main Grave's Battery) just to their north witnessed the advance of federal troops to the western lip of the bowl. These advancing units included the 14th MO, the 50th IL, the 7th Iowa Infantry, and the 14th Iowa Infantry.

The federals reversed the earthworks of the outer defenses, and spent the night entrenched. The 18th TN and 30th TN spent the night in "no man's land," between the fallen outer defenses and Fort Donelson proper.

During the night of February 15, command of the Confederate troops was passed from General Floyd to General Pillow, both of whom relinquished command and arranged for their units to slip away. Lt. Col. Forrest likewise prepared to sneak out with his cavalry. This left General Buckner with insufficient troops to hold the fort and no option other than surrender.

February 16. The Confederates unconditionally surrendered. More than 12,000 CSA soldiers were captured, in addition to large stores of supplies, small arms, and artillery. The study area saw no additional action during the Civil War.

Methods

Background research included review of existing literature and previous work at Fort Donelson (Cornelison and Legg 1993; Jaeger Company 2009; Parsons 2011, 2012; Tankersley and Gregory 2010). No prior archaeological work had been conducted directly in the study area. However, Cornelison and Legg (1993) investigated several different areas of the park, including a possible road location immediately northeast of the monument. The most recent synthesis of the park is a cultural landscape report (Jaeger Company 2009).

Archaeological fieldwork consisted of multiple methods, including shovel testing, intensive metal detecting, total station mapping, and ground penetrating radar survey. Although the field effort used three methods, the work was integrated through the use of the same grid system and total station mapping.

Systematic metal detecting has been shown to be the best method for investigating battlefields and other military sites (Balicki and Espenshade 2010; Conner and Scott 1998; Scott and Fox 1987; Scott et al. 1989). This approach has become the standard for all systematic investigations of military sites. Balicki and Espenshade (2010) identified five major traits characteristic of this approach, including: 1) careful review of the archival record and oral history to identify potential search areas; 2) intensive metal detector survey to locate metal military artifacts; 3) use of instruments that are well suited to local conditions and operators with significant expertise; 4) careful and precise mapping of all individual finds; and, 5) analysis of fired and dropped munitions and other diagnostic artifacts to reconstruct locations and movements within a battle.

Previous studies on similar sites both locally and regionally have been conducted in recent years (Cornelison 2007; Espenshade et al. 2008, 2011; Parsons 2011, 2012; Tankersley and Gregory 2010). The most closely related is Fort Heiman, a unit of Fort Donelson National Battlefield located on the west side of the Tennessee River in Kentucky. Tankersley and Gregory (2010) investigated a portion of the battlefield that was approximately 30 acres in size. Metal detecting concentrated on areas adjacent to existing historic landscape features and level areas that could have supported military activities. The level of effort for this phase included a four-person crew working for five days. The results recorded 395 metal detector finds and 533 artifacts, the vast majority of which were cut nails and fragments. The survey also identified 31 period arms related artifacts, including rifle and pistol bullets, a copper cartridge, dropped canister, and an artillery shell fragment. Artifact recovery locations supported the interpretation that the entire area had been heavily targeted by local collectors. However, it was also possible to infer the locations of a winter encampment based on the presence of brick, ferrous metal, and stove and cooking parts that correlated with historic accounts.

Parsons (2011, 2012) investigated a portion of the Federal fort northwest of Fort Heiman. In late 2010, after the earlier survey by Tankersley and Gregory (2010), the Southeast Archeological Center (SEAC) investigated a portion of Fort Heiman with a particular emphasis on the Federal fort area. The survey area was approximately 36 acres in size and focused largely around an existing road (Parsons 2011). The metal detection survey was conducted by three SEAC personnel and two local volunteers over

two days covering an area approximately 30 acres in size. Results indicated the presence of 169 individual finds and 242 artifacts, with cut nails comprising the overwhelming majority. Additional artifacts included brass percussion caps, canister shot, musket and Minié balls, and one 1856 silver coin. New landscape features were also identified, including dugouts that were likely used for huts, hut pads, earthworks, and historic road segments.

Cornelison (2007) reported on a multi-year investigation at multiple locations at Shiloh National Battlefield in Hardin County, Tennessee. This study provides and invaluable source of comparative data because it was a major battle that occurred only a few months after the fall of Fort Donelson, it was early in the war and produced a similar artifact assemblage, and at least a few of the individual study units had not previously been targeted by relic hunters. Experienced volunteers were used extensively under direct supervision of NPS and SEAC staff. The survey identified 5821 unique finds and 7113 artifacts. Artifact analysis indicated high frequencies of round lead shot (primarily 0.69 caliber), Minié balls, carbine and pistol bullets, artillery, clothing, weaponry and gun parts, and other personal items. Extensive spatial analysis was conducted to look for patterning of particular artifact types. Overall, this study added considerably to overall interpretations of the battle.

The present study is somewhat unusual because of the focus on an area that saw battle action and use as an expedient, forward position camp. Most archaeological studies of camps have examined full regimental camps, generally in safe locations well removed from battle actions (e.g., Balicki 2009; Balicki et al. 2007; Garrow et al. 2000; Geier 2003; Geier et al. 2006; Geier and Winters 1994; Higgins et al. 1995; Jensen 2000; Jolley 2008; Jones 1999; Legg et al. 1991; Legg and Smith 1989; McBride 1994; McBride and Sharp 1991; O'Neal and Reid 2007). There has been little research into expedient camps in harm's way.

GPR was used to prospect for the reported mass grave and other archaeological features. GPR data are acquired by transmitting pulses of radar energy into the ground from a surface antenna, reflecting the energy off buried objects, features, or bedding contacts and then detecting the reflected waves back at the ground surface with a receiving antenna (Conyers 2004:1). Greater contrast in electrical and magnetic properties between two materials at an interface will result in stronger reflected amplitudes (Conyers 2004).

GPR data processing followed standard steps such as frequency filtering, setting time zero (telling the software the location of the surface in relation to the first pulse), and removal of antenna energy ringing and horizontal banding, as well as the creation of amplitude slice-maps (Conyers 2004). Amplitude slice-maps are a three-dimensional tool for viewing differences in reflected amplitudes across a given surface at various depths. The result is a map that shows amplitudes in plan view at various depths below ground surface. Two-dimensional reflection profiles were also analyzed to determine the nature of the features identified on the amplitude slice maps. The final step in the data processing was to integrate the depth slices with the other geophysical and spatial data. Individual GPR anomalies were digitized as features in a unique shapefile with corresponding attributes to facilitate interpretation. The end result

was multiple spatial datasets including GPR anomalies, metal detector finds, shovel test locations, and aerial photography and topographic maps.

Military artifacts were classified based a system modified from previous studies (Legg et al. 1991; Legg and Smith 1989). Briefly, it is organized as a functional system based on broad groups and sub-groups, including Clothing (military and civilian), Arms (ammunition and accoutrements), Personal (jewelry, writing implements), Kitchen (food preparation, consumption and storage), Indulgences (alcohol and tobacco), Medicine, Tools, Architecture, Transportation, and Miscellaneous.

Attributes recorded for small arms included whether they were fired or dropped and army affiliation (Federal, Confederate, indeterminate). The plotting of fired and dropped bullets has long been a standard procedure of battlefield archaeology and is useful in distinguishing troop positions and other battle aspects. Assigning small arms to the Federal or Confederate armies was based on the type, the caliber, and the manufacturing traits of the bullet, which all allowed inference on the weapon type. Artillery shell fragments were measured and then typed using the guide of Melton and Pawl (1996). As feasible, the shell fragments were attributed to Federal or Confederate.

Results

Ninety-eight shovel tests were excavated, and the results indicate a relatively sparse distribution of artifacts across the study area (Figure 4). Of these, 22 were positive, 66 were negative, and 10 were not excavated because of surface obstacles (e.g., concrete), earthworks, or extreme slope. Positive tests generally yielded only low

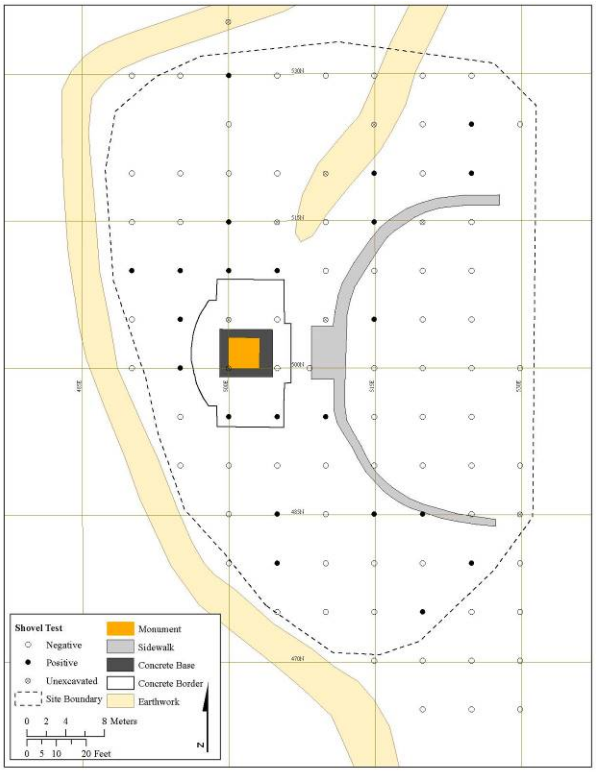


FIGURE 4. Shovel test locations and results.

frequencies of artifacts (mean is 2.0 artifacts per positive test). This phase of the study yielded both prehistoric (*n*=11) and historic (*n*=34) material.

Historic artifacts (*n*=34) recovered from this phase include a range of container glass, plain and decorated whiteware, cut and wire nails, corroded iron, wire, and one kettle or pot fragment (Table 1). Most of these artifacts are consistent with a Civil War period occupation. However, some of the clear container glass, corroded metal, and wire may date from subsequent occupations or use. Spatially, historic artifacts were recovered in several locations, although the higher density shovel tests were located east of, and downslope from, the monument.

Two areas with historic artifacts yielded shovel test profiles that suggested organically enriched deposits. Both of these are east of, and downslope from,

Table 1. Historic Artifacts Recovered from Shovel Tests.

Artifact Description	Total
Container Glass, Aqua	4
Container Glass, Clear	5
Container Glass, Cobalt Blue	1
Container Glass, Olive Green	1
Glass, Burned	1
Iron/ Steel, Unidentified/ Corroded	2
Kettle/ Pot	1
Nail, Cut Common, Unmeasured	6
Nail, Cut fragment	5
Nail, Wire Common, Unmeasured	2
Non-Electrical Wire	3
Whiteware, Overglazed Handpainted	1
Whiteware, Plain	2
Grand Total	34

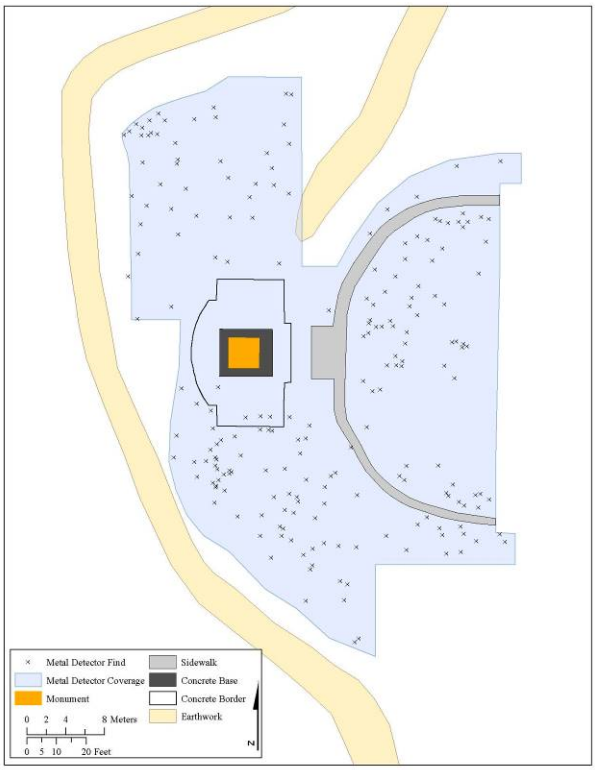


FIGURE 5. Distribution of Metal Detector Finds.

the monument, in an area of increased slope. The first, at grid point 485N 520E, included multiple cut nails and a cow or deer bone. The second, at grid point 520N 525E, was very similar, with 0-30 centimeters of dark brown silt over 30-35 centimeters of yellowish brown silty clay. The top layers in both locations were noticeably darker than other shovel tests. In both cases the artifacts and enriched soil horizon clearly indicated refuse deposits/possible midden. No obvious feature outlines were observed, which suggested that the refuse may have been tossed downslope in an informal manner.

The metal detector survey identified 223 mapped find locations, which yielded 270 artifacts (Figure 5). Artifact counts are higher than the target count because additional artifacts were also collected when they were encountered during the excavation of the targets (e.g., ceramics, glass, nails, etc.). The artifacts were sorted into components to the best extent possible as Civil War, post-Civil War, or Unknown. Most of the artifacts could be placed with little trouble. However, there were exceptions that were grouped in the Unknown category. Certain iron artifacts were heavily corroded and could not be identified beyond their material type. Still other artifacts were known to have been used throughout the historic period and could not be assigned to a more specific occupation.

Artifact Analysis

The Civil War occupation is characterized by 183 artifacts and accounts for approximately 68 percent of the total. Activities from this period are related to the battle itself and occupation by both Confederate and Union troops.

Table 2. Metal Detector Find Artifacts from the Civil War Period by Military Group.

MDF Number	3	5	7	8	9	11	12	13	14	16	17	18	19	21	24	25	27	28	29	30	32	33	35	38	39	41	42	43	44	45
Architecture							1			1		1						1											1	
Arms	1	1	1		1	2			1		1		1	1	2	1	1		1		1	1	1	1	1	1		2	1	1
Clothing																											1			
Kitchen				1				1																					1	
Miscellaneous																														
Tools																				1										
Transportation																														
Grand Total	1	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1

continued

MDF Number	46	47	48	49	50	51	53	55	56	57	58	59	60	61	63	65	66	67	68	69	70	75	77	79	80	84	86	87	88	89
Architecture					1						1						1								1					
Arms	1	1	1	1		2	1	1				1				1						1	1	1				1		1
Clothing														1	1					1	1								1	
Kitchen									2		2		1				1		2							1	1			
Miscellaneous																														
Tools																		1												
Transportation										1																				
Grand Total	1	1	1	1	1	2	1	1	2	1	3	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1

continued

MDF Number	97	99	101	102	103	104	105	106	107	108	109	110	111	113	115	116	117	119	120	121	122	123	125	127	128	129
Architecture					1																1					
Arms	1	1	1						1		1		1	1	1	1	1			1		1	1	1		1
Clothing				1	1		1											1	1							
Kitchen				1	1					1	1									1						
Miscellaneous																										
Tools						1																			1	
Transportation								1				1														
Grand Total	1	1	1	2	3	1	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1

continued

MDF Number	130	131	132	133	134	135	136	137	138	140	142	143	147	148	149	150	151	153	154	155	156	157	158	160	161
Architecture																									
Arms	1	1		2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1		1	2
Clothing																				1					
Kitchen		1		1																			2		1
Miscellaneous			1																						
Tools																									
Transportation																									
Grand Total	1	2	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	3

continued

MDF Number	162	163	164	165	166	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187
Architecture																									
Arms		1	1	1	1	1	1	1	1		1	1	1	1	1		1		1				1	1	1
Clothing	1																				1	1			
Kitchen																2		1		1					
Miscellaneous																									
Tools																									
Transportation										1															
Grand Total	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1

continued

MDF Number	189	190	191	192	194	195	197	199	201	203	205	207	209	211	213	215	217	219	221	223	Grand Total	
Architecture					1																12	6.56%
Arms			1	1			1	1	1	1	2	1	1	1	1	1	1	1	1	1	114	62.30%
Clothing	1																				16	8.74%
Kitchen		2		1																	30	16.39%
Miscellaneous				1		1															3	1.64%
Tools																					4	2.19%
Transportation																					4	2.19%
Grand Total	1	2	1	3	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	183	100.00%

The nature of the post-Civil War occupation is less clear and is characterized by 48 artifacts (18% of total). Activities from this period are attributed to the general maintenance of the park and monument landscape, as well as visitors. The bulk of the artifacts likely date from the 1920s-1940s, after the park was created and the monument was erected.

The remaining class of Unknown is not a unique component. It is represented by 39 artifacts (14% of total).

Military artifacts were further sorted into broad functional categories as defined by Legg and Smith (1989). Table 2 shows metal detector finds (MDFs) from the Civil War period (*n*=183). The highest frequencies are in the Arms Group (*n*=114, 62.3%), followed by Kitchen (*n*=30, 16.4%), Clothing (*n*=16, 8.7%), Architecture (*n*=12, 6.6%), Tools (*n*=4, 2.2%), Transportation (*n*=4, 2.2%), and Miscellaneous (*n*=3, 1.6%). The high frequency of Arms and Ammunition is consistent with expectations for a battlefield setting.

A. Iron Hinge (Bag 42); B. Hardware (Bag 76); C. Hardware (Bag 80); D. Iron Rod (Bag 122); E. Cut Nail/Pin (Bag 77); F. Iron Spike (Bag 85)

FIGURE 6. Architecture Group artifacts.

Architecture Group (*n*=12; Table 3). The name for this group is slightly misleading because very few of these artifacts are associated with structures (Figure 6). Cut nails (*n*=7) and fragments (*n*=2) are the most common type. Other items include a bolt/bracket, hinge, and spike. Based on the volume of iron noted in the metal detector survey this class is under-represented. Recent surveys at Fort Heiman identified high frequency nail scatters and similar patterns were observed at the Confederate Monument (Parsons 2011, 2012; Tankersley and Gregory 2010). Although size variation was noted in the current sample of nails, the majority probably originated from boxes and crates that were used for a range of supplies. As the supplies were expended the boxes likely served as sources of firewood.

Table 3. Military Architecture Group Artifacts.

MDF Number	12	16	18	28	44	50	58	66	80	103	122	194	Total	% Total
Bolt and/or Bracket									1				1	8.33%
Hinge						1							1	8.33%
Nail, Cut		1		1	1			1		1	1	1	7	58.33%
Nail, Cut fragment	1		1										2	16.67%
Spike							1						1	8.33%
Total	1	1	1	1	1	1	1	1	1	1	1	1	12	100.00%

Arms and Ammunitions Group (*n*=114; Table 4). Artifacts in this group are highly variable and include numerous projectiles, artillery fragments, and gun parts (Figures 7-8). Lead balls (*n*=63, 52.3%) are the most common type, followed by buckshot (*n*=12, 10.5%), unidentified lead (*n*=11, 9.7%), Minié balls (*n*=10, 8.8%), canister shot (*n*=4, 3.5%), rimfire cartridges (*n*=3, 2.7%), unidentified and fired projectiles (*n*=3, 2.7%), artillery fragments (*n*=2, 2%), gun parts (*n*=2, 2%), one center fire cartridge (0.9%), one copper percussion cap (0.9%), and one unidentified bullet (0.9%). During the early phase of the war smoothbore firearms were widely used by both sides and included the Model 1816 musket, the 1858 conversion, and the Model 1842 musket. The vast majority of these finds reflect the highly variable nature of firearms in the early war period. Both Union and Confederate armies used smooth bore muskets, and many soldiers brought with them whatever firearms were available at the time, including obsolete flintlock muskets.

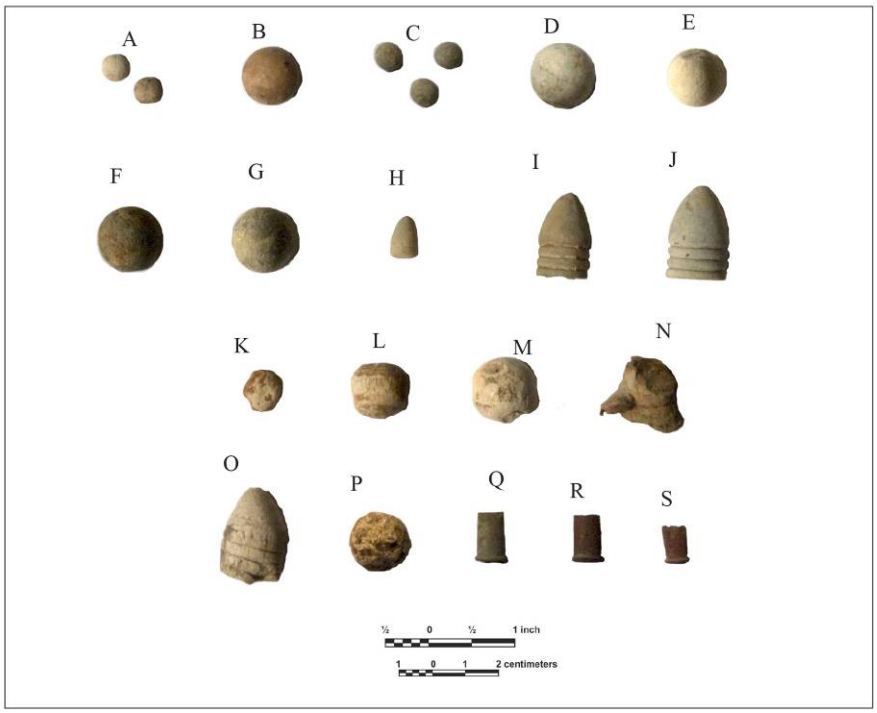
Seventy-five round lead balls were collected in the metal detector survey. These were analyzed according to size, weight, and condition (fired or dropped). Specific calibers include 0.31 (*n*=10), 0.69 (*n*=52), 0.72 (*n*=4), 0.75 (*n*=3), and unknown (*n*=6). Clearly, the most common type was the 0.69 caliber, which fits well with battle accounts. The larger size calibers, which occur in significantly lower frequencies, likely represent obsolete weapons that belonged to individual soldiers rather than standard issue. Lead balls in the 0.31 caliber size were buckshot from buck and ball ammunition. A typical buck and ball round consisted of a 0.69 caliber ball and three buckshot (Thomas 1996).

On the eve of the Civil War there were significant improvements in firearms technology with the advent of the rifled musket and associated Minié ball. These are probably the most recognizable artifact from Civil War battlefields because of their distinctive shape and ringed base. However, the term is often applied in a generic sense that minimizes the variation from different manufacturers. Ten Minié balls were recovered in the current study. Specific calibers include 0.58 (*n*=2), 0.69 (*n*=4), and unknown (*n*=4). The 0.58 caliber types were typical of arms on both sides of the battle. The larger, 0.69 caliber types were possibly from the Model 1842 rifle musket, or French or Belgian rifles/rifle muskets (Coates and Thomas 1990).

Pistols were used by individual soldiers on both sides throughout the war because they brought them as personal items. Their effectiveness as weapons in battle was restricted to close quarters combat when reloading a rifle or musket was not possible. Three cartridge cases were recovered in the current study. All of these are from small arms, including two 0.32 caliber rimfires, and one 0.22 caliber rimfire that were likely from Smith & Wesson Model 1 and Model 3 pistols. A single 0.32 caliber dropped pistol bullet was also recovered.

Six pieces of artillery/fragments were recovered during this study, including iron canister shot (*n*=4) and artillery fragments (*n*=2). Artillery fragments include the complete bottom of an 18-pound shell. The canister shot and artillery were found in association with the two major concentrations of fired ammunition.

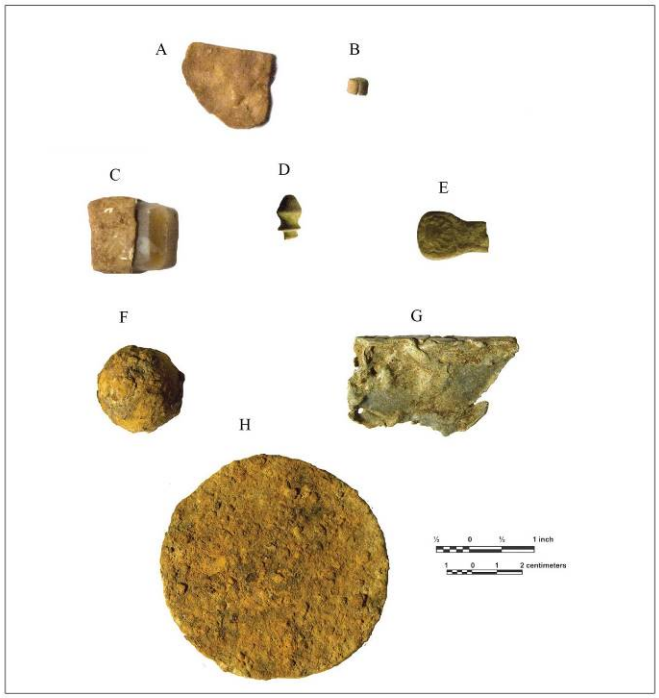
Remains of particular weapons were relatively rare in this study. Specific items include a gun flint of French origin wrapped in lead recovered in the northwest corner in a cluster of other fired ammunition and abundant camp lead.



A. Dropped Buckshot (Bag 117); B. Dropped Lead Ball, .69 Caliber (Bag 117); C. Dropped Buckshot (Bag 150); D. Dropped Lead Ball, .75 Caliber (Bag 150); E. Dropped Lead Ball, .69 Caliber (Bag 73); F. Dropped Lead Ball, .72 Caliber (Bag 97); G. Dropped Lead Ball, .75 Caliber (Bag 167); H. Dropped Pistol Bullet, .31 Caliber (Bag 228); I. Dropped Minié Ball, .58 Caliber (Bag 70); J. Dropped Minié Ball, .69 Caliber (Bag 214); K. Fired Lead (Bag 207); L. Fired Lead Ball (Bag 196); M. Fired Lead Ball (Bag 192); N. Fired Minié Ball (Bag 203); O. Fired Minié Ball (Bag 231); P. Chewed Lead Ball (Bag 147); Q. Fired .32 Caliber (Bag 201); R. Fired .32 Caliber (Bag 204); S. Fired .22 Caliber (Bag 225)

FIGURE 7. Arms and Ammunition Group artifacts.

FIGURE 8. Arms and Ammunition Group artifacts.



A. Flattened Lead (Bag 233); B. Percussion Cap (Bag 46); C. Gun Flint (Bag 226); D. Brass Cap Pouch Finial (Bag 174); E. Brass Escutcheon (Bag 101); F. CanisterShot (Bag 54); G. Lead Sabot Fragment (Bag 175); H. Canister Shot Divider Plate (Bag 69)

Table 4. Military Arms Group Artifacts.

MDF Number	3	5	7	9	11	14	17	19	21	24	25	27	29	32	33	35	38	39	41	43	44	45	46	47	48	49
Artillery Shell	1																									
Artillery, Miscellaneous																	1									
Buck Shot					1														1							
Bullet																										
Canister Shot						1																			1	
Center Fire Cartridge																										
Copper Percussion Cap																		1								
Gun Flint, French (Honey)																										
Gun Part, Other																										
Lead Ball			1		1		1		1	1	1	1	1		1	1				2	1	1	1	1		1
Lead, Unidentified		1								1																
Minie Ball				1				1						1												
Rimfire Cartridge																										
Unidentified Lead Projectile, Fired																										
Total	1	1	1	1	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1

continued

MDF Number	51	53	55	59	65	75	77	79	87	89	97	99	101	107	109	111	113	115	116	117	121	123	125
Artillery Shell																							
Artillery, Miscellaneous																							
Buck Shot														1	1								1
Bullet																							
Canister Shot																							
Center Fire Cartridge																			1				
Copper Percussion Cap																							
Gun Flint, French (Honey)																							
Gun Part, Other																					1		
Lead Ball	2	1	1	1	1			1	1	1	1		1			1	1			1		1	
Lead, Unidentified						1	1											1					
Minie Ball												1											
Rimfire Cartridge																							
Unidentified Lead Projectile, Fired																							
Total	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

continued

MDF Number	127	129	130	131	133	134	135	136	137	138	140	142	143	147	148	149	150	151	153	154	156
Artillery Shell																					
Artillery, Miscellaneous																					
Buck Shot					1				1												
Bullet																					
Canister Shot																				1	1
Center Fire Cartridge																					
Copper Percussion Cap																					
Gun Flint, French (Honey)																	1				
Gun Part, Other																					
Lead Ball	1	1		1	1	1	1	1		1	1	1		1		1			1		
Lead, Unidentified			1										1		1						
Minie Ball																		1			
Rimfire Cartridge																					
Unidentified Lead Projectile, Fired																					
Total	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Table 4 (continued). Military Arms Group Artifacts.

continued

MDF Number	157	160	161	163	164	165	166	168	169	170	171	173	174	175	176	177	179	181	185	186	187
Artillery Shell																					
Artillery, Miscellaneous																					
Buck Shot			1									1					1				
Bullet														1							
Canister Shot																					
Center Fire Cartridge																					
Copper Percussion Cap																					
Gun Flint, French (Honey)																					
Gun Part, Other																					
Lead Ball	1	1	1	1		1			1						1					1	1
Lead, Unidentified													1			1		1			
Minie Ball																					
Rimfire Cartridge					1						1								1		
Unidentified Lead Projectile, Fired							1	1		1											
Total	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

continued

MDF Number	191	192	197	199	201	203	205	207	209	211	213	215	217	219	221	223	Total	% Total
Artillery Shell																	1	0.88%
Artillery, Miscellaneous																	1	0.88%
Buck Shot						1	1										12	10.53%
Bullet																	1	0.88%
Canister Shot																	4	3.51%
Center Fire Cartridge																	1	0.88%
Copper Percussion Cap																	1	0.88%
Gun Flint, French (Honey)																	1	0.88%
Gun Part, Other		1															2	1.75%
Lead Ball			1	1			1	1	1			1	1	1	1		63	55.26%
Lead, Unidentified																	11	9.65%
Minie Ball	1				1					1	1					1	10	8.77%
Rimfire Cartridge																	3	2.63%
Unidentified Lead Projectile, Fired																	3	2.63%
Total	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	114	100.00%

No sword fragments, scabbard tips, or other gun parts were identified, suggesting those items may have been collected after the battle.

Clothing Group (*n*=16; Table 5). Buckles (*n*=7) of various material and style comprise the largest category. Within this category there is one brass belt buckle, three iron belt buckles, one brass clothing buckle, one iron clothing buckle, and one brass knapsack buckle (Figure 9). Many of the belt buckles appear to have come from uniform accouterments such as knapsacks. One clear example of an early war Confederate waist buckle is present.

Additional clothing items include two brass uniform buttons, both of which were classified as three-piece eagle "I" infantry style. In early War contexts, such buttons could be either CSA or Federal issue. Both were found very close together in the northwest corner of the survey area with extensive evidence for combat. This group also includes a well-preserved brass pin/clasp with an ornate floral motif that was likely a personal effect rather than military issue.

The survey also recovered a U.S. regulation 1861 shoulder belt-plate. It was issued to non-commissioned infantry and worn on shoulder belts that supported cartridge boxes and/or swords. This particular example is in relatively good condition with a strongly embossed eagle on the obverse. The reverse side is

A. Brass Plate (Bag 108); B. Eagle "I" Button (Bag 224); C. Eagle "I" Button (Bag 219); D. Brass Buckle (Bag 30); E. Stamped Brass, Dark (Bag 213); F. Brass/Copper Pin (Bag 110); G. Brass Toe Plate (Bag 132); H. Brass Toe Plate (Bag 177); I. Knapsack Buckle, Brass (Bag 53); J. Brass Belt Buckle (Bag 65); K. Iron Buckle, Open (Bag 199); L. Iron Roller Buckle (Bag 87)

FIGURE 9. Clothing Group artifacts.

missing the attachment loops. It has a brass front and lead back. It was recovered east of the monument and downslope in an area that may have been a refuse deposit. Its origin and context are not completely clear, although it likely reflects a brief Union occupation on February 15-16, or after the battle. Another artifact of particular interest is a brass cap pouch finial.

Kitchen Group (*n*=30; Table 6). This group includes food preparation, consumption, and storage items, all of which tend to reflect camps or camp activities (Figure 10). The most common artifact type is ceramics such as whiteware and porcelain (*n*=10, 33.3%).

The next most common type is kettle/pot/skillet (*n*=9, 30%). At least three unique vessels are represented by these artifacts and additional fragments may have been present but not collected. One example consists of the kettle shape and an attached foot and another has a handle element. A few examples of container glass (*n*=4) were collected, although generally incidental to metal artifacts in the same location. For that reason, the frequencies are artificially low. However, their presence suggests food storage activities occurred. Glass containers for preserved foods are common in Civil War camps.

Several eating utensils were recovered, including two separate forks, one of which has a bone handle, and a knife blade. These items offer direct evidence of food preparation and/or consumption. A single deer bone was recovered and offers direct evidence of animal butchery as well as good preservation.

Table 5. Military Clothing Group Artifacts.

MDF Number	42	61	63	69	70	88	102	103	105	119	120	155	162	183	184	189	Total	% Total
Brass Pin/ Clasp							1										1	6.30%
Buckle, Belt, Brass	1																1	6.30%
Buckle, Belt, Iron/ Steel									1				1		1		3	18.80%
Button, Other Brass														1		1	2	12.50%
Clothing Buckle, Brass			1														1	6.30%
Clothing Buckle, Iron/Steel					1												1	6.30%
Knapsack Buckle, Brass		1															1	6.30%
Metal Object, Unidentified											1						1	6.30%
Military Uniform Part						1				1							2	12.50%
Rivet												1					1	6.30%
Shoe Parts, Other, Brass				1				1									2	12.50%
Total	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	100.00%

Table 6. Military Group Kitchen Artifacts.

MDF Number	8	13	44	56	58	60	66	68	84	86	102	103	108	109	121	131	133	158	161	178	180	182	190	192	Total	% Total
Bone Utensil Handle																				1					1	3.30%
Bone, Non-Human																							1		1	3.30%
Container Glass, Amber																			1						1	3.30%
Container Glass, Aqua								1							1								1		3	10.00%
Kettle/ Pot	1			1	1				1				1					2				1			8	26.70%
Knife Blade										1															1	3.30%
Porcelain, Unidentified		1																							1	3.30%
Sheet of Copper						1																			1	3.30%
Skillets					1																				1	3.30%
Stoneware, Domestic, Albany Slipped														1											1	3.30%
Table Fork, Metal																				1	1				2	6.70%
Whiteware, Plain			1	1				1			1	1				1	1							1	8	26.7
Whiteware, Sponged							1																		1	3.30%
Total	1	1	1	2	2	1	1	2	1	1	1	1	1	1	1	1	1	2	1	2	1	1	2	1	30	100.00%

The relatively high frequencies noted in this group compared to others is unexpected. The artifact data clearly indicate a camp existed and a few shovel test profiles suggested potential features. At Folly Island, South Carolina, a well documented and extensively excavated Union camp, Legg and Smith (1989) noted a virtual absence of ceramic tablewares and high frequencies of tinned sheet iron vessels and container glass. It is possible that soldiers at Fort Donelson had greater access to common tablewares because of their proximity to Dover.

Miscellaneous Group (*n*=3). Three of the Civil War period artifacts could not be assigned to specific groups because of their size, condition, or lack of comparable examples. For these reasons, they were assigned to the Miscellaneous Group. One is a possible pewter artifact that may have been an adornment or served a decorative function. A second is a copper/brass fragment that was too small to identify with any confidence. The third is a copper/brass stamped disc or cap with a floral pattern that may have come from a chest or box.

Tools Group (*n*=4; Figure 11). Tools would have been used by soldiers for a wide range of tasks, including equipment maintenance. Two unidentified metal objects were collected that may have been hooks or clamps. Another artifact was a length of hand-wrought chain with

A. Iron Skillet Handle (Bag 85); B. Iron/Steel Blade Fragment (Bag 104); C. Fork and Handle (Bag 194); D. Fork (Bag 229); E. Iron Kettle (Bag 229)

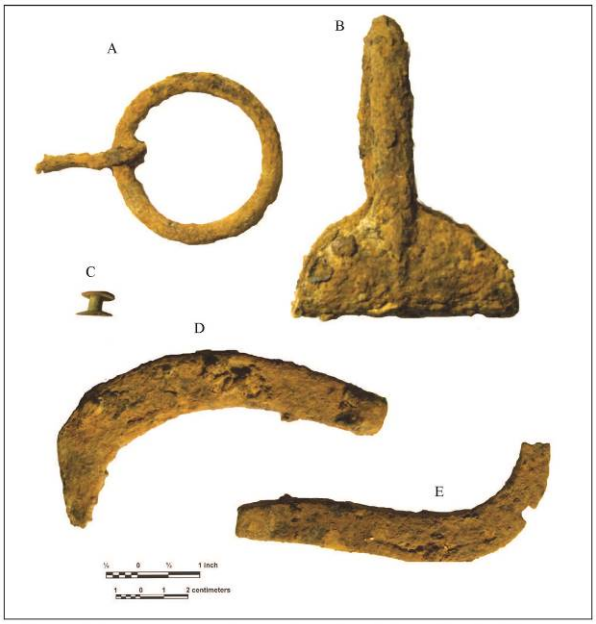
FIGURE 10. Kitchen Group artifacts.

A. Wrench (Bag 83); B. File (Bag 155)

FIGURE 11. Tools Group artifacts.

wire attached. The last artifact was a wrench that was used for an unknown function.

Transportation Group (*n*=4; Figure 12). These artifacts are assumed to have been used on horses or horse-drawn vehicles (including artillery). The sample includes two different horseshoes, one of which was likely used on a mule and the other which still had nails intact. However, because both were incomplete it was not possible to identify the mule shoe with a high degree of confidence. Other transportation artifacts included a horse watering bit fragment and a center ring attachment for a singletree horse yoke. Horses and/or other pack animals were clearly used in the study area.



A. Watering Bit Fragment; B. Center Ring Attachment for a Singletree Yoke (Bag 192); C. Brass Rivet (Bag 99); D. Horseshoe Half (Bag 122); E. Male Shoe Half (Bag 120)

FIGURE 12. Transportation Group artifacts.

Spatial Patterning of Artifacts

Spatial patterning of artifact locations is critical for archaeological interpretations. For this project, selected artifacts and/or groups were plotted by MDF number and location. Figure 13 illustrates the distribution of all Civil War Period MDFs by Military Group.

Arms Group artifacts are located across the entire survey area, but tend to be loosely clustered south of the monument on the highest spot, east and downslope of the monument, and north of the monument (Figure 13). The hilltop and northwest locations are interpreted as firing positions. The downslope cluster may be related to refuse disposal and discard.

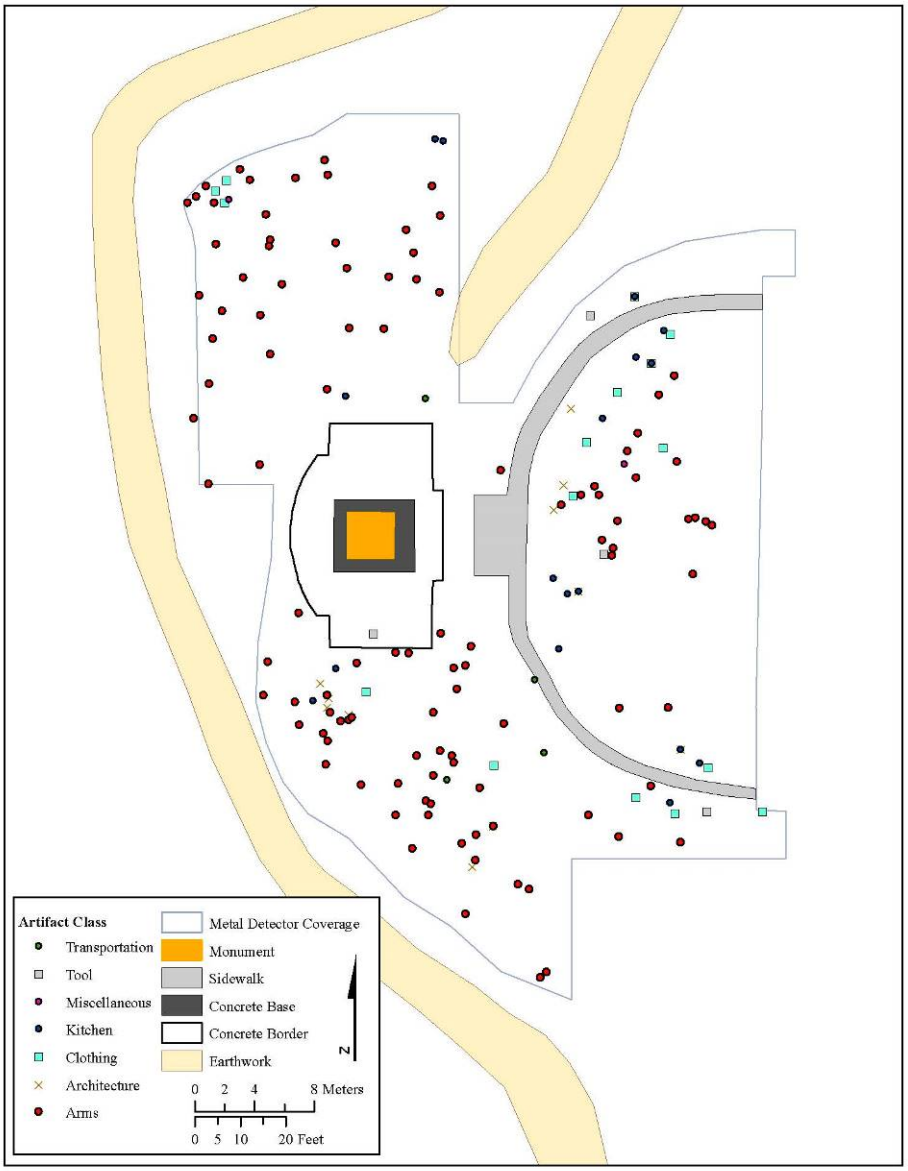


FIGURE 13. Distribution of Civil War period artifacts by military group.

Kitchen Group artifacts are much more restricted, with a loose cluster east and downslope of the monument along the north and south arcs of the walkway (Figure 13). It is also important to note that these are the same areas that yielded positive shovel test results for historic material, organically enhanced soils, and dense clusters of low conductivity iron objects (i.e., nails) that were not collected. Together, these data suggest the presence of refuse deposits and sheet midden that may also contain intact features. The downslope location, away from the highest point, was likely a favorable place for trash disposal on an informal or ad hoc basis. Although formal camp procedures were well established before the war, the distributions here suggest they were not necessarily followed and enforced in the study area.

Clothing Group artifacts occur in much lower frequencies. Although they are dispersed around the survey area, they

tend to follow the same clusters noted above (Figure 13). The densest area is east and downslope of the monument, with six individual items, and then southeast of the monument in a relatively restricted area with four items. These two locations may represent refuse deposits. A third cluster is present in the northwest corner, in a potential firing position, with three artifacts (i.e., two buttons and a buckle). In this case, it appears that these artifacts may have originated from a soldier who became a casualty.

Distribution of Architecture Group artifacts is less than complete because of the biased collection strategy (Figure 13). The plotted artifacts are generally clustered south and east of the monument. Based on metal detector hits noted in the field, nails are distributed throughout the study area. However, the denser concentrations were noted immediately south of the monument (with recovered artifacts), east and downslope of the monument (with recovered artifacts) and along the northern boundary (no recovered artifacts). In certain cases it would be possible to essentially mark the broad outlines of nail clouds (or at least the densest parts) without excavation. Although not replicable, experience from this study suggests that the areas already noted have the densest concentrations.

Tools and Transportation Group artifacts occur in frequencies that are too low to permit meaningful analyses (Figure 13). They are distributed across the survey area except the northern boundary.

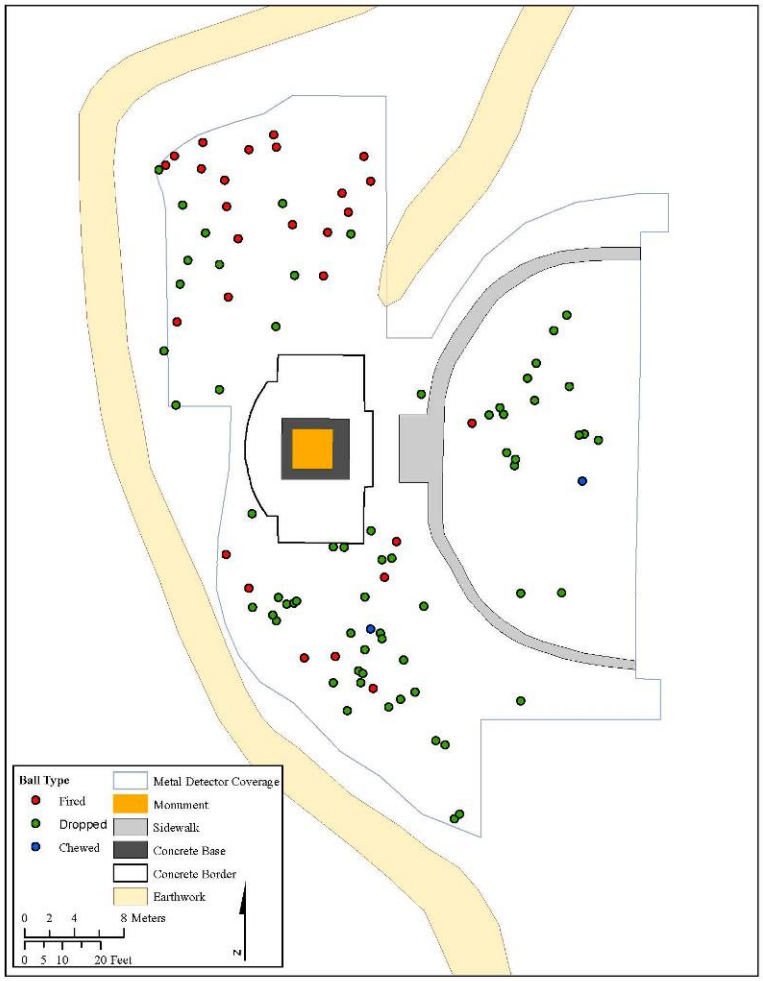


FIGURE 14. Distribution of dropped and fired bullets.

Fired and Dropped Ammunition. Fired and dropped ammunition were previously described as part of the Arms and Ammunition group. Additional analysis was conducted on spatial patterning of these artifacts (Figure 14). Two patterns are worth noting. First, dropped ammunition is generally located in three larger clusters: south of the monument on the highest point (fighting position), east and downslope of the monument (refuse deposit?), and north of the monument (fighting position). Second, the distribution of fired bullets shows two clear clusters: one south of the monument (fighting position) and one northwest of

the monument (fighting position). Of these two, the northern cluster shows a much higher density. This corresponds well to the landform because of its increased exposure to Union fire.

Selected Artifacts. The distribution of selected individual artifacts is shown in Figure 15. This map is useful for discussing the locations of specific artifacts in relation to the broader patterns noted above. For example, lead balls are distributed relatively evenly and fired projectiles are more concentrated in the northern end; most of the buckshot rounds are located south of the monument, suggesting a concentration of troops firing these in that location; Minié balls are more concentrated in the northern end; kettle fragments are located in the three main clusters; canister shot and artillery fragments are associated with fighting positions; military buttons and a buckle were found together in the far northwest corner, suggesting an individual soldier may have become a casualty; and the two forks were found together.

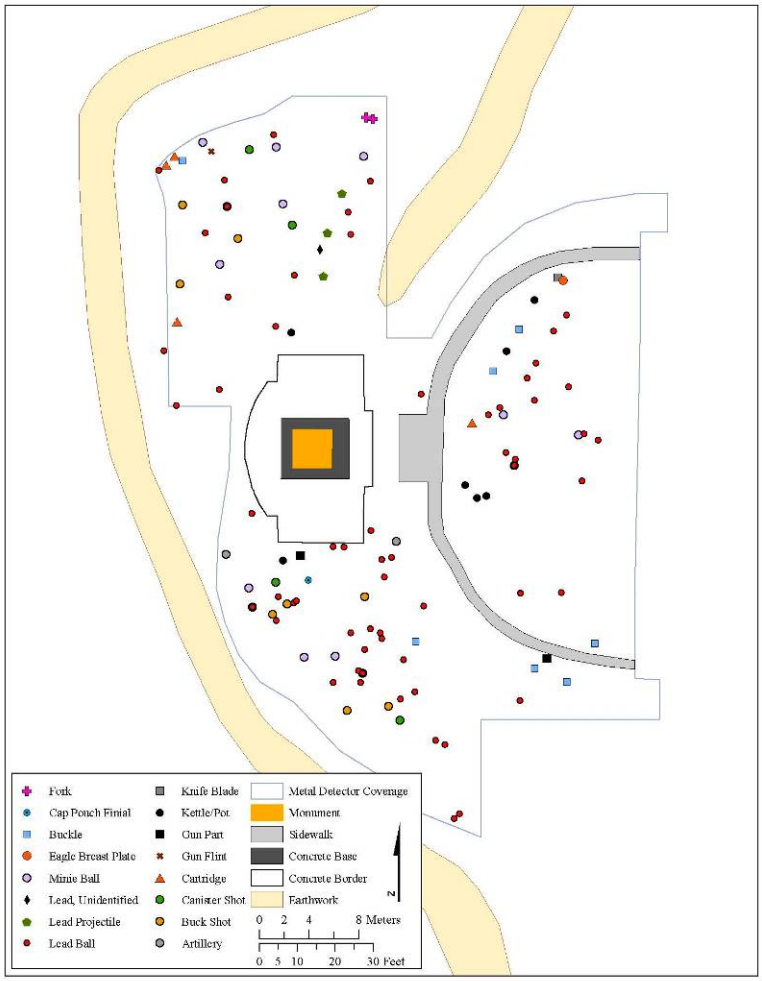


FIGURE 15. Location of selected Civil War period artifacts.

The buckshot rounds are of particular interest because they may be indicative of Forrest's cavalry. In a letter to CSA Secretary of War Judah P. Benjamin, William Richardson Hunt observed "…Colonel Forrest, the most efficient cavalry officer in this department, informs me that the double-barrel shotgun is the best gun with which cavalry can be armed, and that at Fort Donelson one discharge of his shotguns, at close quarters, scattered 400 of the enemy whom three of our regiments had vainly tried to dislodge from the stronghold in a ravine" (http://ehistory.osu.edu/books/official-records/127/0965). Bilby (1996:135) noted that as late as November 1862 Forrest's cavalry was still using "shotguns, squirrel guns, and smooth bore muskets." These two sources clearly establish that Forrest's cavalry was using shotguns and buckshot rounds at Fort Donelson.

Ground Penetrating Radar Survey

Ground penetrating radar (GPR) results identified 17 anomalies (Table 7, Figure 16), ranging in depth from the surface to approximately 80 centimeters. They can be roughly classed into groups

Table 7. Identified GPR Anomalies.

ID	Description	Estimated Depth
1	Sidewalk	Surface
2	Concrete Border	Surface
3	Concrete Border	Surface
4	Compacted Surface and Disturbed Soils	20-70 cm
5	Earthwork Debris	0-25 cm
6	Earthwork Debris	0-25 cm
7	Earthwork Debris	0-16 cm
8	Earthwork Debris	0-20 cm
9	Compacted Surface	8-22 cm
10	Disturbed Soils (Point reflections)	15-70 cm
11	Disturbed Soils (Point reflections)	45-65 cm
12	Disturbed Soils (Point reflections)	45-65 cm
13	Ditch or Trench	30-70 cm
14	Tree Roots - Disturbed Soils (Point reflections)	15-80 cm
15	Tree Roots - Disturbed Soils (Point reflections)	15-80 cm
16	Disturbed Soils (Point reflections)	15-30 cm
17	Disturbed Soils (Point reflections)	15-30 cm
18	Iron Kettle Fragments	10-15 cm

including features visible on the modern surface, buried compacted surfaces, disturbed soils (point reflections), a ditch or trench, iron kettle fragments, and naturally occurring features. Within each feature class there are many possible interpretations depending on the anomalies location relative to other features, anomaly geometry, and possibly even metal detecting results from the anomaly.

Not surprisingly, the sidewalk (anomaly 1) and concrete border (anomalies 2 and 3) near the monument resulted in high amplitude reflections. Even with their high amplitude reflections it is still possible to detect and image features buried below if they are of sufficient contrast and have not been destroyed.

Two buried, compacted surfaces are present. Anomaly 4, east of the monument, is likely an historic road surface. It is also characterized by point reflections, which indicate imperfections within the road surface. The possibility of a trench or secondary earthwork was considered but ultimately ruled out based on topography and historic accounts. It is not a perfectly level feature, but this is consistent with its use as a dirt road that would have eroded with weather and as traffic used the road. The Cultural Landscape Report discusses the creation of Fort Donelson Road in relation to Lock Road, which was an earlier incarnation (Jaeger Company 2009).

Anomaly 9, northeast of the monument, is close to the walkway and concrete borders. For this reason, it is difficult to offer a firm interpretation. It could be a battlefield feature or related to monument construction.

Southwest of the monument there are two smaller collections of point reflections (Anomalies 11 and 12). These correlate extremely well with a large number of lead balls, buck shot, and nails identified by metal detecting. Consideration of both datasets suggests that these might be trash piles or activity areas associated with the battle. Northwest of the monument there is a large area composed of disturbed soils (anomaly 10). There was no metal detecting in this area so there is only the geophysical signature. However, comparison with anomalies 11 and 12 suggests it could be another dense artifact cluster.

Further east from the monument two areas of disturbed soils are located on either side of the sidewalk (Anomalies 16 and 17). These two separate anomalies are likely a single location that was later bisected during sidewalk construction. During the metal detecting survey multiple

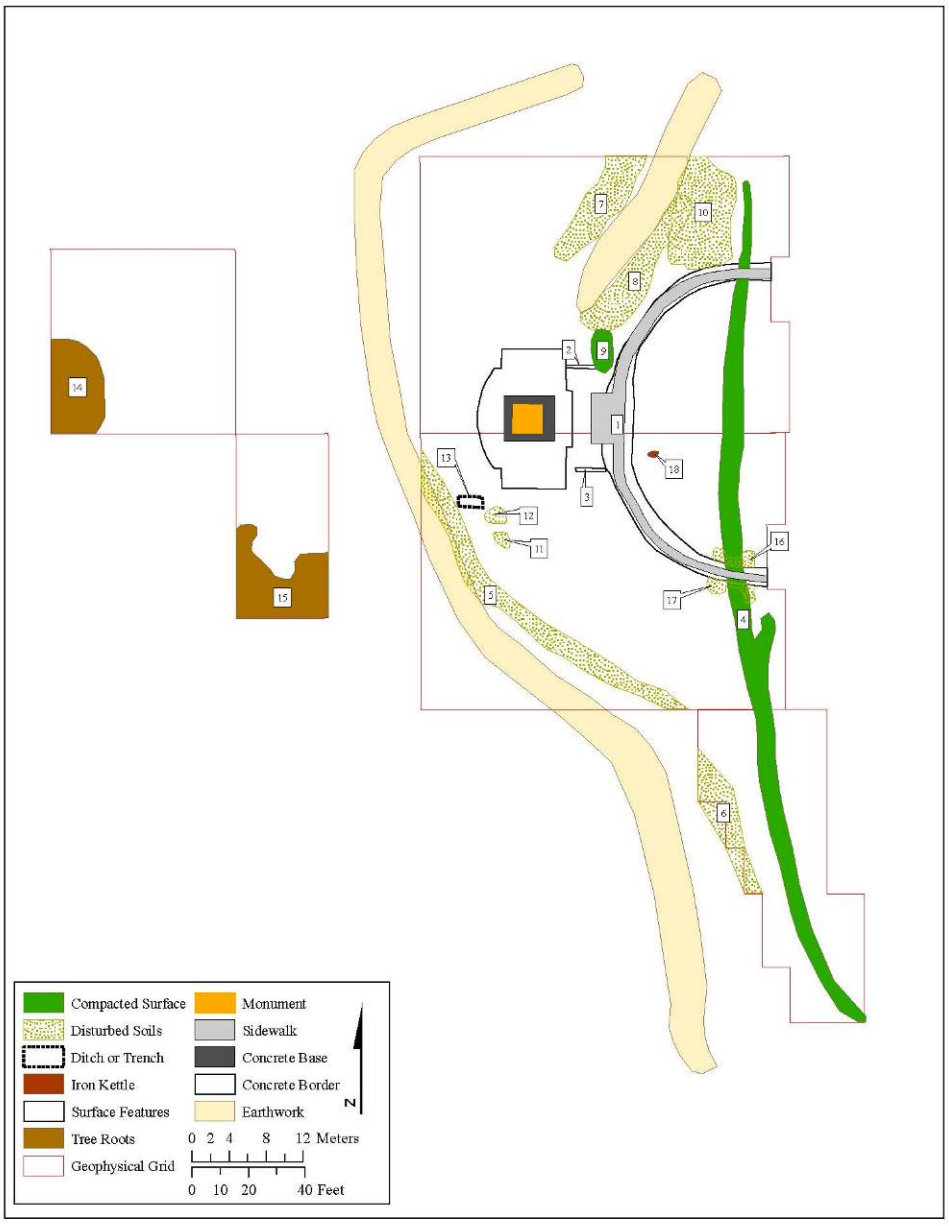


FIGURE 16. Interpretation of ground penetrating radar survey.

pieces of iron, buckles, nails, and a zinc lid were found here. The soils in this area were also much darker than the rest of the surveyed area, suggesting they are richer in organic materials. This evidence, combined with the disturbed subsurface and point reflections found in the GPR suggests that this area may have been a midden of some sort during the Civil War era.

The monument itself has earthworks from the battle on three sides of it. The extent of modern stabilization and reconstruction in these sections is unknown, although they are thought to be in their original location. GPR anomalies 5 and 8 indicate areas on both sides of the standing earthworks that were likely borrowed and/or filled. In these areas the subsoil is closer to the surface than in

other areas.

A probable small ditch or trench was identified in the GPR results south of the monument (Anomaly 13). It is approximately 20 centimeters deep and is located directly adjacent to the earthwork. This is a relatively small depression and its origin is unknown. It may be some sort of rifle pit during the battle or a small borrow pit used during monument construction.

To the east of the monument several kettle fragments were identified during metal detector survey. Upon reexamination of the GPR data it was apparent that these fragments are visible in slice maps and profiles (Anomaly 18). It is extremely rare to have the ability to identify a single artifact in GPR surveys and the size and location of these kettle fragments suggests that, in this case, we are able to pinpoint an artifact cluster. This is yet another example of why excavation is critical to evaluating geophysical data.

Two clusters of point reflections and disturbed soils were identified in the GPR results (Anomalies 14 and 15). These types of reflections, particularly in close association with trees and wooded areas, are probably tree root clusters. No anomalies were noted below these depths.

Discussion

Archaeological, metal detecting, and GPR datasets together provide a more comprehensive perspective of the Confederate Monument landscape. It is now possible to draw the following inferences. First, there is an extensive distribution of battle related artifacts across the study area, with concentrations of fired and dropped ammunition and camp refuse that reflect different activities. Battle activities are suggested on top of the hill, south of the monument and northwest of the monument behind a significant salient in the earthworks. Both areas show relatively dense clusters of fired ammunition and their topography reflects their strategic importance.

Second, although not mapped individually, the data suggest relatively discrete zones with high densities of trash that likely resulted from camp activities. These are located in four areas: southeast cluster near sidewalk, northeast cluster near sidewalk, northern cluster west of earthwork, and southern cluster near monument. These are inferred largely based on field observations of nail clouds and other iron debris that were only collected selectively. Once it became obvious how much metallic debris was present it was necessary to be more selective about what artifacts to retain.

The apparent zone of debris accumulation on the east side of the monument and downslope from the highest point, including kitchen and other domestic artifacts, clearly indicates an occupation that was relatively intense. The origin of these deposits is unclear as there is no direct evidence for structures or camps. However, the artifact density and high organic content noted in at least two separate shovel tests offers indirect evidence. The downslope location may reflect discard activities from camps placed higher on the landform. Excavations at other Civil War camps have indicated the presence of hearths, dugouts, and discrete refuse disposal features (Kim et al. 1993; Legg and Smith 1989).

Four distinct occupational episodes can be inferred from the data, including: 1) a pre-battle Confederate camp; 2) the battle itself; 3) the Union occupation; and 4) general post-Civil War. Not surprisingly,

these are not evenly represented.

Confederate Camp

The first occupational episode is related to Confederate occupation and defense of the fort in early February 1862. The 18th Tennessee was assigned to this spot beginning approximately February 8, 1862, and continued through the fighting. Correlating artifacts with this occupation is difficult because camp-related activities may have occurred in subsequent occupations as well. However, the inference presented here is that the bulk of the artifact assemblage was deposited at this time.

Battle of Fort Donelson

The second occupation represented is the actual battle (February 14-16th). This episode is represented by the numerous fired and dropped bullets, particularly northwest and south of the monument. The high density of fired bullets and overall diversity of artifacts (e.g., musket balls, Minié balls, buckshot, pistol, gun flint, canister shot, artillery) all indicate intense activity and reflect both offensive and defensive tactics. In addition, the artifacts reflect different phases of the battle, including the use of artillery that was likely fired on Confederate defenses, musket/rifle exchanges between individual soldiers, and ending with close quarters combat (as evidenced by fired/dropped pistol cartridges and bullet).

Union Occupation

The third episode included a late battle and post-battle occupation by Union troops beginning in mid-February 1862. The duration and intensity of this occupation is unknown and there are very few specific artifacts that can be directly correlated. However, the U.S regulation shoulder-plate was likely deposited by a Union soldier. An alternative explanation for the dense deposits of potential trash refuse downslope and east of the monument is a cleaning episode by the Union of former Confederate positions. Union camp deposits from February 15 would not be east of the earthworks, as that location would have been exposed to CSA sniping. However, following the surrender, the Union troops occupying the outer defenses would probably have moved inside (east of) the earthworks.

Post-Civil War

The fourth occupation includes activity related to overall park maintenance and monument erection (1860s-1940s), with the bulk of the activity likely refined to the 1920s-1940s, after the park was officially created. There are very few artifacts that can be directly linked to this period aside from a range of coins. The Cultural Landscape Report discusses maintenance activities including clearing brush and other vegetation from the outer defenses and the presence of seasonal laborers between 1932 and 1933 (Jaeger Company 2009:22). A major focus of the work at this time was stabilization of the earthworks. It is unknown to what extent the monument area may have been used prior to creation of the park, although limited farming is likely. Since the monument's creation it has been an active visitor's stop, a fact that is supported by the numerous coins, pull tabs, foil, and other modern debris identified in the current study.

Feature Potential

Excavations at the Sevierville Hill site

outside Knoxville identified 48 features from the Civil War period, including 41 hearths and 7 dugout structures (Kim et al. 1993). Hearths were variable, with several exhibiting only burned subsoil and no obvious bases, and other with dense fill deposits and well-defined morphology. Almost all hearths contained artifacts and faunal material. One common occurrence was the presence of relatively high frequencies of cut nails. The dugout structures were likely the remains of log and canvas winter huts with partially excavated or trampled floors and attached chimneys (Kim et al. 1993). Hearths were often found in direct association. They were divided into two classes based on feature form and fill volume. All of these contained artifacts and faunal remains. Category I structures had rectangular, oval, or irregular shaped dugout sections in plan view. Category II structures had rectangular or square with rounded corners in plan view and vertical to in-slanting walls and flat bases in profile.

Similar results were found at Morgan Hill site on the University of Tennessee campus in Knoxville (Angst et al. 2012). This site consisted of a Confederate Army position from the Siege of Knoxville in 1863 and included two trenches, two gun emplacements, and associated features. Excavations revealed numerous hearths and artifacts reflecting a very short-term occupation associated with a forward Confederate position. One of the interesting aspects of the study was the conclusion that many of the hearths and entrenchments were not necessarily constructed in accordance with existing regulations (Angst et al. 2012).

Archaeological work at the Sevierville Hill and Morgan Hill sites yielded significant information on camp activities in comparable settings to the present study at Fort Donelson. These types of features may also exist in the current study area. The high artifact density and diversity, organically enhanced soils in select locations, and potential GPR targets all support the potential for features.

It must be stressed that this location was probably not a typical regimental camp for either the CSA or USA. For the CSA, there was probably only a limited, expedient camp location for units occupying the earthworks through the night. The accounts of the 18th TN suggest that most of the nights leading up to and during the battle were spent on the ground, without tents. Once Fort Donelson fell, the Union troops probably established their regimental camps within the inner defenses, and again, only short-term, expedient camps are expected at the outer defenses.

It is also interesting that refuse was allowed to accumulate in surface deposits. Later in the War, both armies had regulations regarding the careful policing of camps and the disposal of all refuse in sinks (subsurface refuse pits). The lack of such policing may reflect either the expedient nature of the CSA encampment or the general lack of military discipline among green, early-war troops.

Conclusions

The current study included multiple methods and techniques to assess the Confederate Monument landscape, including systematic, close interval shovel testing; intensive metal detecting; and GPR. New and significant information was produced that enhanced interpretation of this particular portion of the Fort Donelson landscape. In addition to the results and interpretations discussed above, several conclusions can be drawn.

As noted by other researchers, shovel testing is generally not productive on military/battlefield sites, even at close intervals (Cornelison 2007; Espenshade et al. 2002). There is very little correlation between positive shovel tests and MDF results. As a general observation, shovel testing requires extensive effort for very little return, and the time spent shovel testing could better be used for additional metal detecting. The results produced here are consistent with similar studies of other battlefields (Cornelison 2007; Espenshade et al. 2008; Espenshade et al. 2011).

Systematic metal detecting is the best approach for military/battlefield sites. Although there are different definitions for systematic, at a minimum it requires a well-defined sampling strategy, dedicated grid, physical recording of all find locations, experienced operators, and professional equipment. The current study focused on very intensive sampling of a small area using slow, controlled sweeps, experienced personnel, and multiple instruments with overlapping coverage. It is important to note that it did not intend to achieve 100% coverage (if that is even possible). One of the important outcomes of this project is that multiple instruments with different settings yield complementary results with little overlap (Figure 17). In other words, each of the instruments identified different objects and materials at different depths. Specifically, the Minelab metal detector recovered approximately 80 percent of the lead artifacts and the Teknetics metal detector recovered approximately 80 percent of the iron artifacts. Consideration of the artifacts recovered from only a single instrument may have resulted in different (and erroneous) interpretations.

The results achieved here are due in part to a landscape that has been well protected from unauthorized relic hunting and collecting. It demonstrates the tremendous information potential of these landscapes and, conversely, the damage caused by relic hunting. On one end of the spectrum is Fort Heiman, which has been heavily collected, and on the other the current study and Shiloh, which have been under NPS control for several decades each. It is clear that undisturbed landscapes have greater information potential. The results presented here should serve as an example of what can be learned from systematic and archaeological studies focused on contextual information.

GPR was an excellent method for identifying buried features and probable artifact clusters. Additional geophysical techniques, particularly magnetometry, may also be applicable to military and battlefield sites. One of the emerging hypotheses from the current study is the ability of GPR to image and detect individual artifacts and clusters. The reasons for this are not clear at present; however, it is possible that the conductivity of certain materials and their aggregation may produce a halo effect that enhances the reflected waves. This is unexpected and generally not recognized in the literature. It also suggests that geophysical methods should be used prior to metal detecting when artifacts are still in the ground. Heckman (2004), in a simulated test environment, concluded that certain geophysical methods were not useful for military/battlefield sites. The current study directly challenges that conclusion and should be tested in the future, especially on sites that have not been heavily collected.

There is no evidence for a mass grave or individual battlefield graves in the areas examined by GPR. A mass grave, in particular, would be expected to have a

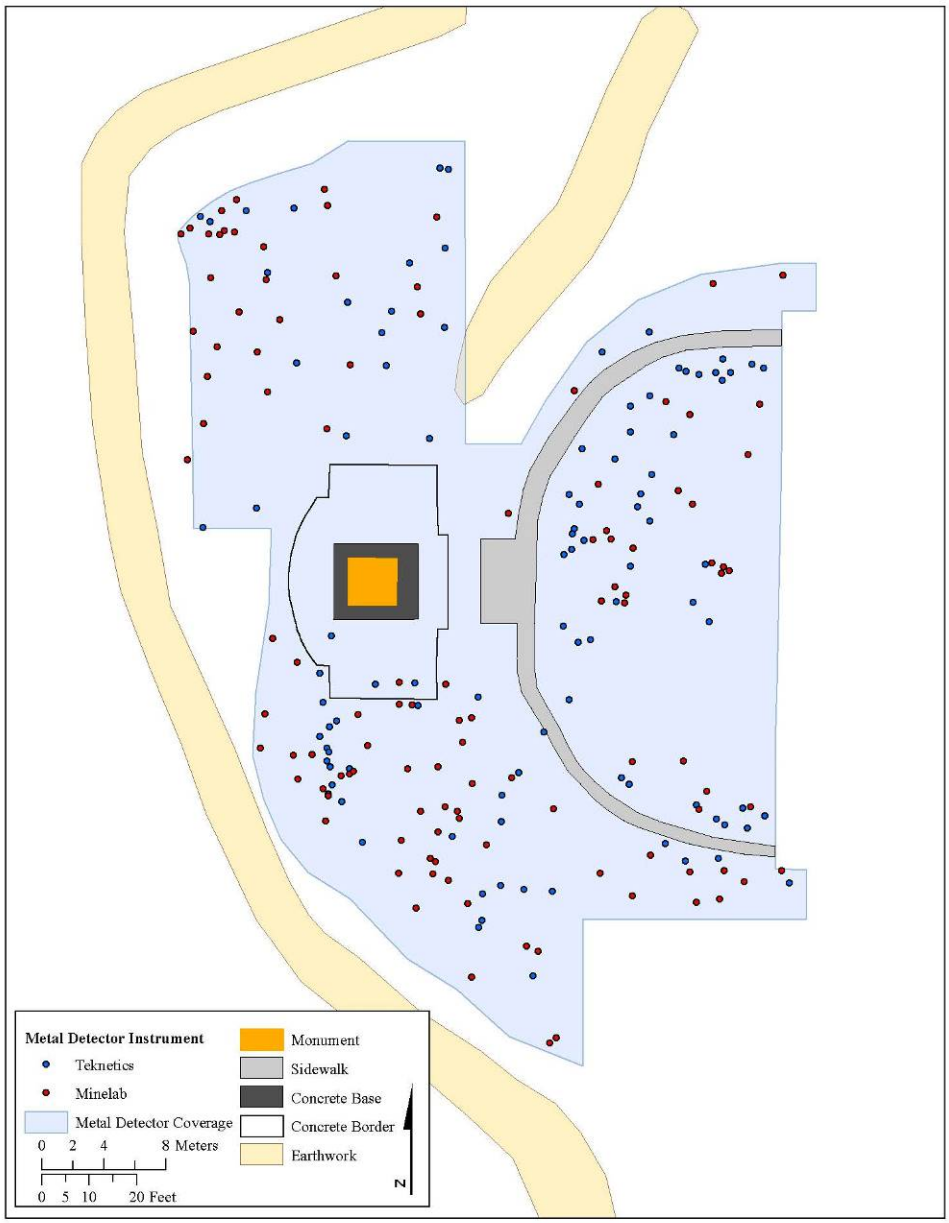


FIGURE 17. Distribution of metal detector finds by instrument.

high-amplitude geophysical signature, similar to what was noted at Andersonville (Pomfret 2005). Of course, there is still a distant possibility that graves may exist in the study area, but the GPR results were high resolution and convincing. Therefore, at this time it appears that the mass grave is in a different location that is still unknown.

The Confederate Monument landscape comprises a very small part of site 40SW190 as it is officially recorded (i.e., larger than 400 acres and encompassing the core battlefield and fort areas). The historic component at site 40SW190 can be assigned to three broad periods: the Battle of Fort Donelson (February 1862), Confederate Monument construction (1933), and generic mid- to late-twentieth century maintenance (1940s-1970s). Of these occupations, the period related to the battle and its immediate aftermath is

best represented. The historic component contains high artifact density and diversity, and features are likely. The artifact assemblage includes a range of types and materials and reflects both battle related and domestic activities (pre- and post-battle). Subsequent periods are also represented, although in lower frequencies.

Overall, the Confederate Monument landscape has excellent integrity and is relatively undisturbed from modern activities, especially unauthorized metal detecting and relic hunting. This study has demonstrated that intact deposits are present. Potential features are expected that may indicate camp and domestic activities, as well as previously undocumented military features (e.g., wagon road, rifle pits). Preservation appears to be relatively high as indicated by the recovery of a single faunal specimen. All of these factors suggest that other areas of Fort Donelson may be expected to have similar deposits. Therefore, the entire landscape has significant research and interpretive potential.

References

Angst, Michael G., Gail L. Luymon, Kandace Hollenbach, and Jessica L. Vavrasek
2012 *Archaeological Investigations at Morgan Hill, Site 40KN298, University of Tennessee, Knox County, Tennessee*. Archaeological Research Laboratory, University of Tennessee, Department of Anthropology, Knoxville, Tennessee.

Balicki, Joseph
2009 The Confederate Cantonment at Evansport, Virginia. In *Fields of Conflict*, edited by Douglass Scott, Lawrence Babits, and Charles Haecker, pp. 255–277. Potomac Books, Dulles, Virginia.

Balicki, Joseph, and Christopher T. Espenshade
2010 Doug Scott Military Archaeology, Eastern Style: Status 2010. *Journal of Middle Atlantic Archaeology* 26:1–6.

Balicki, Joseph, S. Traum, K. Holland, and B. Corle
2007 *Archaeological Investigations at Site 44CU146: The Bivouac of the 14th Connecticut Infantry*. John Milner Associates, Inc., Alexandria, Virginia.

Bearss, Edwin C.
1959a Troop Movement Map--Fort Donelson, Feb. 12, 1862. Fort Donelson National Military Park, Dover, Tennessee.
1959b Troop Movement Map--Fort Donelson, Feb. 13, 1862. Fort Donelson National Military Park, Dover, Tennessee.
1959c Troop Movement Map--Fort Donelson, Feb. 14, 1862. Fort Donelson National Military Park, Dover, Tennessee.
1959d Troop Movement Map--Fort Donelson, Feb. 15, 1862, 2:15-3:15 PM. Fort Donelson National Military Park, Dover, Tennessee.
1959e Troop Movement Map--Fort Donelson, Feb. 15, 1862, 5:00 PM. Fort Donelson National Military Park, Dover, Tennessee.
1959f Troop Movement Map--Fort Donelson, Feb. 15, 1862, 8:00-9:15 AM. Fort Donelson National Military Park, Dover, Tennessee.
1959g Troop Movement Map--Fort Donelson, Feb. 16, 1862, 9:00 AM. Fort Donelson National Military Park, Dover, Tennessee.

Bilby, Joseph G.
1996 *Civil War Firearms: Their Historical Background, Tactical Use and Modern Collecting and Shooting*. Combined Books, Conshohocken, Pennsylvania.

Coates, E.J., and D.S. Thomas
1990 *An Introduction to Civil War Small Arms*. Thomas Publications, Gettysburg, Pennsylvania.

Conner, Melissa and Douglas D. Scott
1998 Metal Detector Use in Archaeology: An Introduction. *Historical Archaeology* 32(4):68-82.

Conyers, Lawrence
2004 *Ground-Penetrating Radar for Archaeology*. AltaMira Press, Walnut Creek CA.

Cornelison, John E., Jr.
2007 *An Archaeological Report on a Metal Detecting Survey and Limited Site Testing at Shiloh National Battlefield, Shiloh, Tennessee*. Southeast Archaeological Center, National Park Service, Tallahassee, Florida.

Cornelison, John E., Jr., and Scott S. Legge
1993 *Report on Archeological Investigations of the Possible Graves, Exterior Earthworks, and Historic Roads at Fort Donelson National Battlefield, Dover, Tennessee*. Southeast Archaeological Center, National Park Service, Tallahassee, Florida.

Espenshade, Christopher T., Robert L. Jolley, and J. B. Legg
2002 The Value and Treatment of Civil War Military Sites. *North American Archaeologist* 23:39–68.

Espenshade, Christopher T., Shawn Patch, and Mark Swanson
2008 Intensive Archaeological Investigations of a Proposed Access Road Corridor and Interpretive Center Location, Resaca Battlefield, Gordon County, Georgia. Report on file, New South Associates, Stone Mountain, Georgia. Georgia Department of Natural Resources.

Espenshade, Christopher T., Patrick Sullivan, and Mark Swanson
2011 Intensive Archaeological Investigations of Proposed Park Improvements, Resaca Battlefield, Gordon County, Georgia. Report on file, New South Associates, Stone Mountain, Georgia. Georgia Department of Natural Resources.

Garrow, Patrick H., Jeffrey L. Holland, and Larissa A. Thomas
2000 *Camp Lincoln of the Army of Southeastern Missouri: Historical and Archaeological Studies of 23CT355, Van Buren, Missouri*. TRC Garrow Associates, Inc., Atlanta, Georgia.

Geier, Clarence R.
2003 Confederate Fortification and Troop Deployment in a Mountain Landscape: Fort Edward Johnson and Camp Shenandoah, April 1862. *Historical Archaeology* 37(3):31–45.

Geier, Clarence R., David R. Orr, and Matthew Reeves
2006 *Huts and History: The Historical Archaeology of Military Encampment during the American Civil War*. University Press of Florida, Gainesville, Florida.

Geier, Clarence R., and Susan R. Winters
1994 *Look to the Earth: Historical Archaeology and the American Civil War*. University of Tennessee Press, Knoxville, Tennessee.

Heckman, Elsa
2004 Geophysical Methodologies and Test Site for Battlefield Archaeology. Master's Thesis, University of Arkansas, Fayetteville, Arkansas.

Higgins, Thomas F., III, Charles M. Downing, Kenneth E. Stuck, Gregory J. Brown, and Karl J. Reinhard
1995 *The Civil War at Glouchester Point: Mitigation of Site 44GL358 Associated with the Proposed Route 17 Coleman Bridge Project, Glouchester County, Virginia*. William and Mary Center for Archaeological Research, Williamsburg, Virginia.

Jaeger Company, The
2009 *Fort Donelson National Battlefield Cultural Landscape Report (90% Draft)*. The Jaeger Company, Athens, Georgia.

Jensen, Todd L.
2000 Civil War Archaeology at Fort Pocahontas: Life between the Trenches. *Quarterly Bulletin of the Archaeological Society of Virginia* 55(3):126–134.

Jolley, Robert L.
2008 An Archaeological Survey of an 1864 Union Civil War Earthwork and Encampment (44FK111), Frederick County, Virginia. *Quarterly Bulletin of the Archaeological Society of Virginia* 63(1):18–40.

Jones, Joe B.
1999 "Our Brigade Has Never Been in Winter Quarters, But Always in Tents & Moving About..." Lessons Learned from the Archaeological Evaluation of Camp Mason, an Early Confederate Winter Encampment near Winchester, Virginia. *Quarterly Bulletin of the Archaeological*

Society of Virginia 54(1):20–35.

Kim, Yong W., Gary D. Crites, Charles H. Faulkner, Lance K. Greene, and Amy Lynne Young
1993 *The Sevierville Hill Site: A Civil War Encampment on the Southern Heights of Knoxville, Tennessee*. Transportation Center, University of Tennessee, Knoxville, Tennessee.

Knight, James R.
2011 *The Battle of Fort Donelson: No Terms But Unconditional Surrender*. The History Press, Charleston, South Carolina.

Legg, James B., Christopher T. Espenshade, and Lynn M. Snyder
1991 *Camp Baird: Archaeological and Historical Investigations of the Autumn 1864 Camp of the 32nd U.S. Colored Infantry, Hilton Head Island, South Carolina*. Brockington and Associates, Inc., Atlanta, Georgia.

Legg, James B., and Steven D. Smith
1989 *"The Best Ever Occupied...", Archaeological Investigations of a Civil War Encampment on Folly Island, South Carolina*. Research Manuscript Series 209. South Carolina Institute of Archaeology and Anthropology.

McBride, W. Stephen
1994 Civil War Material Culture and Camp Life in Central Kentucky. In *Look to the Earth*, pp. 130–157. University of Tennessee Press, Knoxville, Tennessee.

McBride, W. Stephen, and William E. Sharp
1991 *Archaeological Investigations at Camp Nelson: A Union Quartermaster Depot and Hospital in Jessamine County, Kentucky*. University of Kentucky, Program for Cultural Resource Assessment, Lexington, Kentucky.

Melton, J.W. and L.E. Pawl
1996 *Melton & Pawl's Guide to Civil War Artillery Projectiles*. Thomas Publications, Gettysburg, Pennsylvania.

O'Neal, Michael K., and Dawn Reid
2007 *Limited Excavations at 44IW0204: The Fort Huger Encampment Site, Isle of Wight County, Virginia*. Archaeological Consultants of the Carolinas, Clayton, North Carolina.

Parsons, Timothy A.
2011 *Archaeological Investigations at Fort Heiman, Fort Donelson National Battlefield, Calloway County, Kentucky*. Southeast Archaeological Center, National Park Service, Tallahassee, Florida.
2012 Rivers and Rifles: The Role of Fort Heiman in the Western Theater of the Civil War. *Journal of Kentucky Archaeology* 1(2):16–38.

Patch, Shawn, Sarah Lowry, Patrick Severts, and Christopher Espenshade
2012 *Archaeological and Geophysical Survey and Assessment, Fort Donelson Confederate Monument Landscape, Fort Donelson National Battlefield, Stewart County, Tennessee*. New South Associates, Inc., Stone Mountain, Georgia.

Pomfret, James E.
2005 *Ground Penetrating Radar Survey at Andersonville National Historic Site*. Georgia Department of Transportation, Atlanta, Georgia.

Scott, Douglass D., and R.A. Fox Jr.
1987 *Archaeological Insights into the Custer Battle: An Assessment of the 1984 Field Season*. University of Oklahoma Press, Norman, Oklahoma.

Scott, Douglass D., R.A. Fox Jr., Melissa A. Conner, and D. Harmon
1989 *Archaeological Perspective on the Little Big Horn*. University of Oklahoma Press, Norman, Oklahoma.

Tankersley, Matthew, and Danny Gregory
2010 *Archaeological Characterization of the Fort Heiman Landform, Calloway, Kentucky*. New South Associates, Inc., Stone Mountain, Georgia.

Thomas, D.S.
1996 *A Handbook of Civil War Bullets and Cartridges*. Thomas Publications, Gettysburg, Pennsylvania.

Shawn M. Patch
New South Associates, Inc.
408-B Blandwood Avenue
Greensboro, North Carolina, 27401

Christopher T. Espenshade
Commonwealth Cultural Resources Group, Inc.,
2530 Spring Arbor Road
Jackson, Michigan 49203

Sarah Lowry
New South Associates, Inc.
408-B Blandwood Avenue
Greensboro, North Carolina, 27401

Patrick Severts
New South Associates, Inc.
6150 East Ponce de Leon Avenue
Stone Mountain, Georgia, 30083

THOMAS M.N. LEWIS: THE MAKING OF A NEW DEAL-ERA TENNESSEE VALLEY ARCHAEOLOGIST

Marlin F. Hawley and David H. Dye

Thomas M.N. Lewis was a noted Tennessee archaeologist, getting his start as a professional archaeologist during the heady, early years of the New Deal and Tennessee Valley Authority (TVA) archaeology program, first under William S. Webb and then at the University of Tennessee. Lewis and his associates spent nearly a decade involved in field activities in advance of the impoundment of the Tennessee River and its major tributaries. Out of their effort came several now classic archaeological reports, including Hiwassee Island and Eva: An Archaic Site, both with Madeline D. Kneberg. Lewis's path to becoming a leading Tennessee archaeologist was a long and complex one, with archaeology initially pursued as an avocation around his hometown of Watertown, Wisconsin. Lewis parlayed his success (and income) as a businessman into an expansion of his archaeological interests, venturing far from Wisconsin to collect and excavate, while devoting substantial portions of his income to amassing a collection of artifacts from across the United States. We review what is known of Lewis's early life, from his birth in Pennsylvania in 1896 to the eve of his being hired for the TVA Norris basin project in January 1934. Finally, we chart the influences that led him to become a professional archaeologist, including his early membership in the Wisconsin Archeological Society, which served as a model for his development of the Tennessee Archaeological Society.

For a relatively well-known figure Thomas M.N. Lewis's early life has not been well documented, (cf. Sullivan 1999) (Figure 1). In this article we use a diversity of sources, including correspondence, college catalogs, notes buried in the pages of *The Wisconsin Archeologist*, newspaper articles, and bits of information from his daughter, to piece together a picture of his early life and how events in these years led to his increasing interest in professional archaeology and ultimately a career directing the New Deal Tennessee Valley Authority archaeology program at the University of Tennessee. Lewis lived during a formative period in American archaeology – one concerned with forging classificatory procedures and establishing workable chronologies. Lewis's close relationship with Will C."W.C." McKern and his participation in the Wisconsin Archeological Society shaped him from a person who had an interest in establishing his own personal collection of artifacts to a professional who wrestled with federal and state bureaucracies and dealt with the frustrations of producing scientifically significant publications. Through his interactions with, first, McKern, and then an ever widening circle of likeminded associates, Lewis gradually constructed a new identity as an archaeologist.

Understanding the academic, political, and social milieu of archaeologists like Lewis, who worked to advance the study of archaeology, is important because it showcases the progress of archaeological science and how individuals, through hard work and personal sacrifice, overcome numerous obstacles to alter and change scientific paradigms (Nye 2009; Terrell 2009). Lewis was ambitious and well-educated, but he lacked the necessary educational requirements of an advanced degree. Nevertheless he was a self-made archaeologist at a time when one could still advance in the field with little formal

FIGURE 1. Thomas M.N. Lewis (*Courtesy of Nancy L. Ladd*)

post-graduate education in anthropology or archaeology. The course of Lewis's professional life was based on the solid foundation provided by his early education and the family and friends who nurtured his interests and allowed him the freedom and opportunity to pursue his dreams and passions. Lewis is typical of many archaeologists of the time who began as collectors and evolved into professional archaeologists, often under the guidance and tutelage of mentors who recognized the potential for those interested in the serious, scholarly pursuit of archaeology.

Early Years and Education

The first-born child and only son of George C. and Margaret Nelson Lewis, Thomas McDowell Nelson Lewis was born on March 27, 1896 in Chambersburg, Pennsylvania, where he entered the world in the embrace of his mother's prominent and tight-knit family. The baby's mother, Margaret (b. 1873) was the eldest of six children from the union of Thomas McDowell Nelson and Esther Anne "Annie" Hollinger Nelson. Of Irish-Scots ancestry, Margaret's father cast a long shadow in Chambersburg (Figure 2). Trained in civil engineering at Lafayette College, Nelson was a locomotive manufacturer for various railroads in the region, a lumberman, and by the late 1870s, with a succession of partners, he emerged as one of the region's most successful bridge contractors (Coffin 1879:233; Seilhamer and Seilhamer 1905:105). Endowed with "a magnetic personality" (Public Opinion 1919:2) and very much a man of the late Victorian era in his multifaceted business interests, by the time of his death from congestive heart failure in 1919, T.M. Nelson was or had been involved in a bewildering array of local entrepreneurial (i.e., construction; hosiery mill; shoe manufacturing and retail store; automobile dealership; planing mill), civic (borough engineer; Justice of the Peace; county commissioner; county clerk), fiduciary

FIGURE 2. Thomas McDowell Nelson (Seilhamer and Seilhamer 1905).

(founder, director of the Chambersburg Trust Company), educational (board, trustee of Wilson College; founder of Penn Hall corporation), and religious (financial officer, trustee, Falling Spring Presbyterian Church) activities in the community (Coffin 1879; Public Opinion 1919; Seilhamer and Seilhamer 1905). Upon his death, the local newspaper referred to him as an "active citizen" and captioned his portrait "local capitalist and manufacturer"—both of which sentiments barely capture the range of his interests and achievements (Public Opinion 1919:1). In any final assessment, the Nelson family had achieved considerable comfort and affluence and, as suggested by the pattern of awards of bridge contracts, the family patriarch was socially and politically well-connected (Phipps 2002).

Tom Lewis grew up in Watertown, Wisconsin, a town of several thousand people located almost equidistantly between Milwaukee and Madison on the Rock River. By Chambersburg standards, Watertown was a primitive frontier town; Chambersburg was settled in 1730 in the era of colonial-era expansion into the Appalachians. By contrast, Watertown's founding dates to 1836, when the first cabin was built on the city's future site. In Watertown, Lewis's father, George C. Lewis, operated the family business, the G.B. Lewis Company. The only son of George Burnham Lewis and Sarah Ingalsbe Lewis, George C. was born in 1871, in Watertown; his parents had moved west from New York state to settle in the town a decade earlier, on the tail end of an outmigration of Yankee stock from New York and southern New England (Hudson 1986, 1988). George B. Lewis was an entrepreneur who with his brother, Robert E. Lewis, purchased a mill on the west bank of the Rock River in 1863-4 and began to saw lumber that was used to manufacture blinds, doors, and window sashes (Anonymous 1903:31; Ott 1917:79-83; Quaife 1924:175-176; Watertown Historical Society 2013a). After his brother retired in 1870, George B. Lewis was the business's sole owner and operator until 1878 when he was joined by his son-in-law, forming the Lewis & Parks Company. In about 1875, the pair diversified into the production of beekeeper's supplies and soon became one of the country's preeminent manufacturers of "beeware"—supers and other beehive components (Historical Publishing Company 1887:133; Oertel 1976:261).

The business was formally incorporated in 1890, and with the death of the junior partner, became known as the G.B. Lewis Company (Figure 3). A

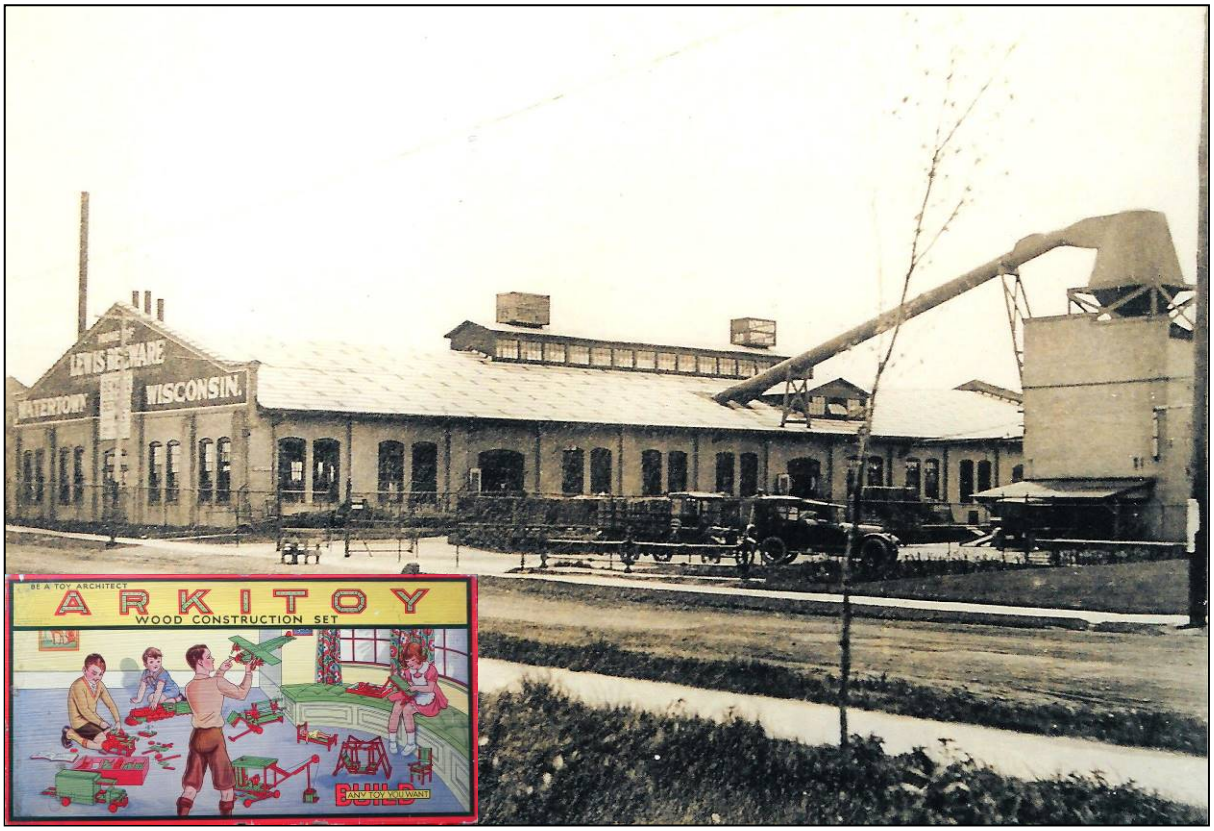


FIGURE 3. G.B. Lewis Company, Watertown, Wisconsin, ca. 1921. Inset at lower left: Arkitoy Wood Construction Set Box (*Courtesy of the Watertown Historical Society*).

family business in almost every sense, after, George B. Lewis passed away in 1903 his son, George C. assumed the mantle of company president, while George C.'s brother-in-law, Lewis W. Parks managed the company's manufacturing plant; his sister, Marguerite Parks, was employed as the administrative secretary (Anonymous 1903; Ott 1917; Quaife 1924). Under George's leadership, the business grew and by the early 1920s had a large factory in Watertown (though no longer on the riverfront) and six branch facilities: Memphis (TN); Lynchburg (VA); Wichita (KS); Denver (CO); and Fromberg (MT) (Anonymous 1921a, b). For a while the company maintained an export office in New York, which arranged shipments overseas, and its merchandise was sold by over 250 apiary suppliers throughout the country (Anonymous 1924:44). Over the next several years the number of branches shrunk to include only four, but all were strategically placed to reach markets throughout much of the United States east of the Rocky Mountains: Albany (NY), Lynchburg (VA), Sioux City (IA), and Texarkana (AR) (Anonymous 1926a). Additionally, the company shrewdly placed itself at the forefront of U.S. domestic beekeeping through aggressive advertising in trade journals, its catalogs, publication of projections of honey production, and informational articles and books on all aspects of beekeeping (e.g., Atkins and Hawkins 1924; Hawkins 1920).

The company held numerous patents (e.g., U.S. Patent Office 1913:xxviii; 1921:v) and, always adapting to changing markets, in the early twentieth-century

and the years leading up to World War II, expanded its line of wood products to include all manner of non-apiary goods, including heavy-duty, wire-re-enforced, shipping crates (Duchaine 1946), toys (the play lumber *Arkitoy* line), commercial-grade golf ball washers, and even airplane propellers. Such changes notwithstanding, beeware remained a company mainstay. After the war, the company shifted to the production of plastics. The G.B. Lewis Company was purchased by the Menasha Corporation in the mid-1950s, while the beekeeping side of the business was sold to an Illinois company (Oertel 1976:261; Watertown Historical Society 2013a). By this time, of course, Tom Lewis had long since relinquished all ties to the company.

Despite the occasional setback, such as a 1909 fire that destroyed the Rock River plant (Watertown Historical Society 2013a), the occasional worker's strike, and economic ups-and-downs, the company grew to become a major employer in Watertown with a labor force of over 100 people processing nearly 1000 train carloads of raw lumber annually and was "one of the largest bee supply manufacturing concerns in the world" (Quaife 1924:176). And as the company flourished, so too did the family. The Lewis family became "… one of prominence in Watertown and Mr. Lewis occupies an enviable position in business circles" (Quaife 1924:176). The family, along with their domestic staff, resided in a spacious Georgian Revival house, built for them in 1895, a block or so west of the company's original location on the riverfront (Figure 4) (Penkiunas and Heggland 2001). In 1915, and likely to the great surprise of all, the family added a daughter, George Anne (Figure 5).

Tom Lewis attended local public schools and in 1910 was enrolled in the

FIGURE 4. The George C. Lewis Home in Watertown, Wisconsin.

FIGURE 5. George C. and Margaret Nelson Lewis Family Portrait, ca. 1918 (*Courtesy of Judith Coker*)

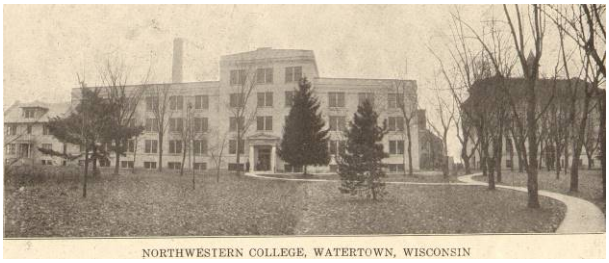


FIGURE 6. Northwestern College, Watertown, about 1912 (*Courtesy of the Watertown Historical Society*)

academic department of Northwestern College, an Evangelical Lutheran institution in Watertown with a demanding curriculum (Figure 6). Originally established as a preparatory school for would-be seminarians, by the early twentieth century the institution enlarged

its educational offerings. The college's academic department provided a five year course of study, with heavy doses of English, German, history, Latin, mathematics, and natural science, intended to give its students a solid base for, according to the college catalog, "the study of sciences" (Northwestern College 1910:31). In his second year at the school, Lewis advanced to the collegiate department, but after the 1912-3 term he was listed exclusively as a Special Student (Northwestern College 1910, 1911, 1912, 1913, 1914) - students "who do not desire to pursue the regular course of study [but] may pursue a select course, provided they [are] prepared to take the work of the regular class pursuing these branches" (Northwestern College 1910:13). Although perhaps reflective of reorganization of the college's curriculum, Lewis's change in status more than likely signals his family's intent for him to complete his education elsewhere, rather than seek the degree of Bachelor of Arts degree at Northwestern. The college had a business department, but Lewis pursued a traditional liberal arts and sciences education, albeit probably somewhat more advanced than that of most contemporary public middle or high schools in the area.

Northwestern College was a prologue to Lewis's education. Doubtless at his mother's insistence, Lewis was sent east in 1914 to the Lawrenceville Preparatory School in New Jersey, which as the name implies prepared its charges for further academic work, specifically at Princeton University, where he enrolled the next year. The family placed a premium on education. Margaret matriculated at Wilson College, a women's college located a short walk from her parent's home in Chambersburg's north end district; siblings and members of the extended family were educated at Princeton and other regional colleges (Seilhamer and Seilhamer 1905:105). Lewis's father attended and graduated from St. John's Military Academy in Delafield, Wisconsin (*Watertown Daily Times* 1938).

At Princeton, Lewis earned a degree in economics, graduating with a very respectable cumulative 3.8 GPA (Tindal 2011). Like so many of his generation, his studies were interrupted following the United States' reluctant entry into the Great War. He enlisted in the U.S. Naval Reserve Force in May 1917 and following basic training briefly served on the patrol vessel *USS Yacona* as a seaman first class. After wintering at the Bensonhurst Naval Base on Long Island, Lewis was assigned to *Subchaser 52* as a boatswain's mate in April 1918 for the duration of the war and patrolled the shipping lanes of the North American coastal Atlantic for marauding German submarines. Honorably discharged in late 1918, Lewis was awarded the Victory Medal for his service (Dye 2013; National Archives n.d.). Because of the delay caused by military service, Princeton awarded Lewis the B.A. degree in 1920, though he was officially a member of the Class of 1919.

Lewis returned home in 1920 at the age of 24. Bespectacled and at a trim and fit 6 ft 2 in and with steel gray eyes and black hair, he cut a handsome figure. A tattoo on his left forearm was a reminder of his naval service (U.S. Department of State 1923). While his father might well have expected that upon his return he would take an interest in the company (why else the degree in economics?), Lewis had other ideas and instead pursued graduate work at the University of Wisconsin (UW) in Madison. His biography in the National Research

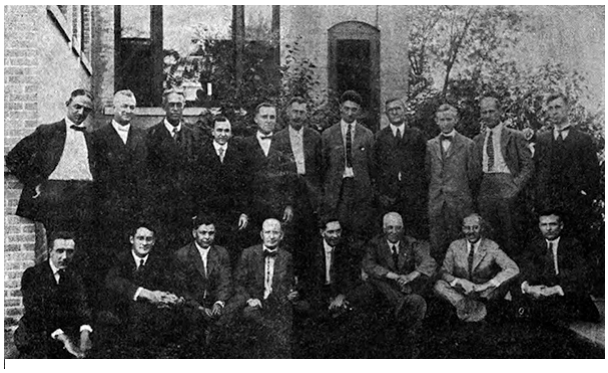


FIGURE 7. Convocation of top U.S. beekeepers at G.B. Lewis Company, fall 1920. Tom Lewis is second from left, front row; the sixth man from the left may be George C. Lewis (*Anonymous* 1921a).

Council (NRC) *International Directory of Anthropologists* (1938:59) refers to his graduate education in the most general terms: "grad. work at Univ. of Wisconsin," with the implication that he had taken courses in anthropology or a closely allied discipline (see also Anonymous 1975; Herskovits 1950; Lyon 1996:40; National Research Council 1940). The UW, however, did not offer degree work in anthropology until 1928, when Ralph Linton was hired, though occasional courses with anthropological content had been taught in the sociology department since the late nineteenth-century (Curti and Carstensen 1949:342-343; Gleach 2009; Lepowsky 2000:fn8). A regular program of coursework in anthropology, though, was not an option at the time Lewis attended the university.

At the UW, Lewis's graduate courses shifted from economics to focus on animal husbandry (University of Wisconsin 1920:445). The impetus for this change in direction is difficult to assay, but it is perhaps worth noting that his maternal grandfather had among his diverse interests, one in animal breeding, and had once owned a prized Friesian bull named Ben H of Maple Glen (Wales 1889:670) and was also a long-time member of the Holstein-Friesian Association of America (Houghton 1899, 1915; Wales 1889). In the years leading up his final illness and eventual death, Nelson took great pride in his flock of chickens, which won prizes for their productivity (*Public Opinion* 1919:2). Admittedly conjectural, Lewis may have obtained his interest in animal husbandry from his maternal grandfather, who was then only recently deceased. Our suspicion is that Lewis's early motivations and interests owed more to the Nelson's than the Lewis family, in part, as his mother had "a very strong personality and was indeed a Nelson" (Ladd 2013).

Lewis later alleged that his graduate studies were cut short by his father's declining health (Crawford 1972:2; Herskovits 1950:110), at which time he felt he had little recourse but to enter the employment of the G.B. Lewis Company. While difficult to evaluate, it is perhaps worth noting that George C. Lewis died suddenly at home of a massive cardiac arrest, though not in the 1920s, but in December 1938 (*Watertown Daily News 1938*). Although a heavy smoker (Ladd 2012), if he suffered from a protracted illness or period of worsening health in the early 1920s, his death notice made no mention of it. Further, Lewis's course of study was not cut short, for he did graduate following two years of study, probably in May 1920. Whether bowing to family pressure or through some other inducement, that summer Lewis found himself on the company payroll (Figure 7). The following spring he was posted to Memphis where he assumed management of a recently established distribution outlet for the company. The South and Mid-South constituted an important market for the company with its mild winters. J.J. Wilder (1920:4), editor of *Dixie Beekeeper*, affirmed that the company "have long been heavy shippers

FIGURE 8. G.B. Lewis Company Branch building, Lynchburg, Virginia (*Courtesy of Lynchburg Museum System*).

of … beekeeping supplies into all parts of the Southern States" and further noted that "[t]he G.B. Lewis Company, Watertown, are our greatest advertisers of beekeeper's supplies…" (Wilder 1921:3). This is the reason for the branch outlet in Memphis and for another established in Virginia. Lewis played a role in developing these markets, as in 1922, he was dispatched from Memphis to manage the branch office recently opened in Lynchburg, Virginia (Figure 8). Lewis remained there until late 1923, when he returned to Watertown to direct sales for the company (*Watertown Gazette* 1923); the next year, he was named general branch manager for the company (*Watertown Gazette* 1924a).

The Lynchburg years were good ones for Lewis. In 1923, he took time away from the company and travelled to Europe, where he toured the British Isles, France, Italy, Switzerland and Spain (U.S. Department of State 1923). Of more lasting significance, while stationed in Lynchburg he met and courted Miss Leone Carrie Anderson, the daughter of a local lumberman. The couple married in June 1924 and took up residence in Watertown (*Watertown Gazette* 1924b). After the death of the family matriarch, Sarah Lewis, later in the year, they moved into the spacious family home with Lewis's parents. Their only child, Nancy, was born in 1926. The couple divorced in 1939 (Sullivan 1999:72). Leone was never a favorite of Lewis's mother, who regarded her as "a spoiled Southern belle" (Ladd 2012). Although historically southeastern Pennsylvania, where Chambersburg was located, shared much culturally with adjacent portions of Virginia and West Virginia, the city lay north of the Mason-Dixon Line, and 25 miles west of the Gettysburg battleground, and had been successively raided, occupied, and finally burned during the Civil War. Born just a few years after these events

Margaret was a Northerner through and through, while Leone was a proper (and pampered) Southern girl. However, insofar as geography played any role in relations between the two women, it is worth considering that both Lewis and his sister had affinities for, and ended up living, in the South.

The move to Tennessee in January 1934, coupled with Lewis's position with the TVA archaeology program, added new stresses to an already frayed and perhaps unraveling marriage. He was away from home for much of the time, checking in with field supervisors, or was deeply involved in wrangling with university, state, and federal bureaucracies. He also became caught up in a protracted, bitter and public feud with his, by then, former supervisor, William S. Webb (Dye 2013; Fagette 1996; Lyon 1996; Schwartz 2015), which reached its apogee around the time of the couple's separation and divorce. Prior to the divorce, Nancy returned to Watertown to be cared for by Lewis's parents (Ladd 2012).

The Evolution of a Collector

Lewis travelled regularly and extensively throughout the U.S. and with each passing year took on ever greater responsibilities of the business operations. Yet, even as he did so, his interest in collecting artifacts and pursuing his interest in archaeology grew and began to compete for more and more of his attention and resources. Employed and with a steady income, Lewis kept his eye on the collector's market, purchasing artifacts and even entire collections from as far afield as Alabama, Arkansas, Illinois, Minnesota, New Mexico, Oregon, Tennessee, and Texas. Business trips afforded the opportunity to scout for artifact collections and to search for archaeological sites. Company staff took to leaving him news clippings on archaeological topics (Lewis 1930a). A profile in the *Watertown Daily Times* in 1930 reported that while he was the head of the Arkitoy division of the company, he also boasted of possessing one of the largest collections in the state, then consisting of some 10,000 to 12,000 artifacts (*Watertown Daily Times* 1930). Lewis attributed his passion for artifact collecting to his early teenage years, "when he used to walk through the fields with his grandfather," in search of arrowheads and other artifacts (*Watertown Daily Times* 1930:8). As his paternal grandfather passed away in 1903 when he was seven years old, he could only have been referring to his maternal grandfather, Thomas M. Nelson, with whom he collected artifacts in Pennsylvania. On visits to Chambersburg the two evidently roamed the fields flanking Falling Springs Run or the larger Conococheague Creek, a tributary of the Upper Potomac River.

These early experiences were enough. The seed planted, he prowled fields near Princeton in search of artifacts (without any luck) when in college and while in Virginia in 1922-3 conducted his first excavations, hastily opening several small mounds most likely somewhere north of Lynchburg (Lewis 1926a). It would be surprising if he had not collected in Arkansas and Tennessee during the time he lived in Memphis in 1921-2. Without his catalog, however, the full scope of his peregrinations in search of artifacts remains sketchy at best. Upon settling with his family in Watertown, he directed as much spare time as possible to artifact hunting, first in the vicinity of his hometown, and gradually farther afield (Anonymous 1927a:67; Lewis 1929a).

Table 1. T.M.S. Lewis and the Wisconsin Archeological Society.

Elected to Membership: April 1926; maintained at least into mid-1950s
Public Collections Committee: April 1926 – November 1929
State Survey Committee: November 1929 – March 1936
Board of Directors: March 1934 – March 1935
Vice President: March 1934 – March 1935
Advisory Board: March 1935 – March 1936
Honorary Member, ca. late 1930s/early 1940s
Awarded Increase A. Lapham Award in 1946

Sources: Anonymous 1927a, b; 1928; 1929a,b; 1930; 1931; 1932; 1934a,b; 1935; 1943; 1946; 1951; Lewis 1931b; 1932b; 1934; 1954.

Lewis might have remained a collector but for the fortuitous meeting in spring 1926 with two other collectors while out one afternoon walking fields near Watertown. In the course of their conversation, the two exhorted Lewis to join the Wisconsin Archeological Society (WAS). Apparently unaware of the organization (then its third decade of existence), Lewis promptly sent in an application and in April 1926 was elected to membership (Anonymous 1926b:98). In the company of men and women with similar interests, he not only attended as many of the society's meetings as his job and familial responsibilities permitted, but also took on committee assignments as well. In July 1926, he was appointed to the standing committee on Public Collections and by the late 1920s, when he was deemed one of the Society's most active field workers, he was a member of the State Survey Committee's later incarnation, the Survey, Research, and Record Committee (Anonymous 1926b:98, 1930:132) (Table 1).

In 1927, Lewis began to exhibit portions of his large collection at the WAS meetings, including materials from the Watertown area and from Virginia (Anonymous 1927a:67, 1927b:97). Other exhibits followed (Anonymous 1928:120) and in 1931 he began to present reports on his activities, such as an address entitled, "The Thrills of an Amateur Archaeologist," which was illustrated with a selection of artifacts from Arkansas, Florida, and Virginia (Anonymous 1931:143). In 1931 he published the results of a trip to Florida, during which he explored a mound near Pensacola (Herron 2012; Lewis 1931a) and following a trip to the Mid-South in September 1931, he delivered a paper, "Archaeological Explorations in Kentucky and Tennessee" (Smith 1932), a version of which was subsequently published in The Wisconsin Archeologist (Lewis 1932a). Although not presented at a WAS meeting, it was noted in the Archaeological Notes section of the journal that Lewis offered a presentation with the provocative title, "Indian Burial Treasures," to the Watertown chapter of the American Association of University Women at its annual meeting in 1932. The title notwithstanding, he reportedly "discussed the origin of the American Indians, their routes in peopling the continent, and … the purposes and methods of the field student in American archaeology." The presentation included artifacts "from the speaker's extensive archaeological collection, including materials from Florida, Alabama, Louisiana, Illinois, Ohio, Kentucky, Virginia and Wisconsin" (Anonymous 1932:178). An October 1933 presentation

Table 2. Notable Members of the Central Section and their Institutional Affiliations, 1922-1935.*

Individual	Institutional Affiliation(s)
Willoughby M. Babcock	Minnesota Historical Society, St. Paul
C. M. Barbeau	National Museum of Man, Canada
Samuel A. Barrett	Dir., Milwaukee Public Museum
Glenn A. Black	Indiana Historical Society
Peter A. Brannon	Cur., Alabama Dept. of Archives and History
Charles E. Brown	Dir., Wisconsin Historical Society Museum, Madison
John Champe	Prof. Anthropology, University of Nebraska
George L. Collie	Prof. Anthropology and Dean, Beloit College; Cur. Logan Museum
Fay-Cooper Cole	Prof. Anthropology, University of Chicago
P.E. Cox	Tennessee State Archeologist
Henry Field	Cur. of Physical Anthropology, Field Museum, Chicago
Alton K. Fisher	Asst. Cur. of Anthropology, Milwaukee Public Museum
George R. Fox	Dir., Chamberlain Memorial Museum, Three Oaks, Michigan
Melvin R. Gilmore	Museum of American Indian, then Cur. of Ethnology, Univ. of Michigan
Charlotte Gower	University of Chicago, then Univ. of Wiscosnin
Emerson F. Greenman	Museum of Anthropology, Univ. of Michigan, Ann Arbor
Carl E. Guthe	Anthropology Museum, University of Michigan; NRC Committee on State Archeological Surveys
Melville Herskovits	Prof. Anthropology, Northwestern University, Evanston
W.B. Hinsdale	Curator, University of Michigan Museum, Ann Arbor
A.E. Jenks	Prof. of Anthropology, University of Minnesota
Charles R. Keyes	Prof. German, Cornell College; Iowa State Archeologist
Alfred V. Kidder	Phillips Academy, Andover, MA
Madeline D. Kneberg	University of Chicago
Wilton M. Krogman	University of Chicago
Ralph Linton	Field Museum; then, Univ. of Wisconsin, Madison
Berthold Laufer	Cur. of Anthropology, Field Museum, Chicago
Will C. McKern	Cur. of Anthropology, Milwaukee Public Museum
William C. Mills	Dir., Ohio State Museum, Columbus
Warren King Moorehead	Phillips Academy, Andover, MA
Georg Neumann	University of Chicago
A.T. Olmstead	Univ. of Illinois, Urbana; then Univ. of Chicago
John E. Pearce	Prof. of Anthropology, University of Texas
Alonzo W. Pond	Logan Museum, Beloit College
A.R. Radcliffe-Brown	Prof. of Anthropology, University of Chicago
Robert Redfield	University of Chicago
Edward Sapir	Prof. Anthropology, University of Chicago
Frank M. Setzler	Indiana State Archeologist
Henry C. Shetrone	Cur. of Archeology, Ohio State Museum, Columbus
Alanson Skinner	Cur. of Anthropology, Milwaukee Public Museum, then Museum of American Indian
Huron H. Smith	Cur. of Botany, Milwaukee Public Museum
Frederick Starr	Prof. Anthropology, University of Chicago
Wm. Duncan Strong	Asst. Cur. of Anthropology, Field Museum, then Univ. of Nebraska
William S. Webb	Prof. of Anthropology, University of Kentucky
George A. West	Pres. of Board of Directors, Milwaukee Public Museum

*Source: Isaac and Pheanis 1978: Table 11; Isaac 1979:Table 17; membership list, 1929, CSAS Archives n.d.

focused on the Wickliffe site on the Mississippi River in western Kentucky (Lewis 1933a), versions of which were also published (Lewis 1933b, 1934). All the while he ascended the ranks of the organization (see Table 1), including in absentia election to the WAS Board of Directors and as a vice president in March 1934 (Anonymous 1934a:77). After moving to Tennessee, he was appointed to the Society's Advisory Board (Anonymous 1935:101).

When Lewis joined the Wisconsin Archeological Society, Charles E. Brown urged him to attend the upcoming annual meeting of the Central Section of the American Anthropological Association (AAA) in Columbus, Ohio, in May 1926. Established in 1922, the organization was the brainchild of the Milwaukee Public Museum's [MPM] Samuel A. Barrett, with the first meeting held in Chicago. Despite its affiliation with the AAA, its early programs generally emphasized archaeological reportage over ethnography or physical anthropology (Isaac 2001; Isaac and Pheanis 1978:7). Importantly for a budding archaeologist, the roster of its members is a veritable Who's Who of the ranks of Midwest and Mid-South anthropologists (Table 2), though the papers read at the meetings ranged far beyond the geographic focus of the mid-continent. Lewis traveled to the

Table 3. Annual Meetings of the Central Section of the American Anthropological Society, 1926-1933.[1]

Year	Location	Attended*	Member§
1926	Columbus, Ohio	Definite	
1927	Chicago, Illinois	Probable	
1928	Beloit, Wisconsin	Probable	definite
1929	Evanston, Illinois	Definite	definite
1930	Milwaukee, Wisconsin	Probable	
1931	Three Oaks, Michigan	?	
1932	Ann Arbor, Michigan	?	
1933	Chicago, Illinois	?	

*T.M.N. Lewis attendance at 1926 Columbus meeting based on Lewis to C.E. Brown, May 11, 1926, Brown Papers; "probable" based on membership status and/or relative proximity to Watertown, Wisconsin.
§ Membership status derived from fragmentary early records of the present iteration of Central Section, the Central States Anthropological Society, National Anthropology Archives, Smithsonian Institution, Washington, D.C.

Central Section meeting in Columbus and subsequently joined the organization (Lewis 1926b). Organizational records for the early years are incomplete, but they indicate that he was a dues paying member in 1928 and 1929 and attended at least the 1929 Evanston, Illinois meeting and almost certainly others (Table 3), as the meetings were held in relatively nearby Midwestern venues. Like the National Research Council, Committee on State Archaeological Surveys, the Central Section promoted an agenda supportive of disciplinary professionalization (Isaac 2001; Isaac and Pheanis 1978; cf. Linton 1923). While presented papers were typically empirical site reports, the meetings also served as the platform for some of the major developments in American archaeology in the pre-WWII era. McKern, for instance, presented a key paper at the 1934 meeting, "Certain Culture Classification Problems in Middle Western Archaeology," an early contribution in the evolution of the Midwestern Taxonomic Method (McKern 1934).

Although a man of considerable

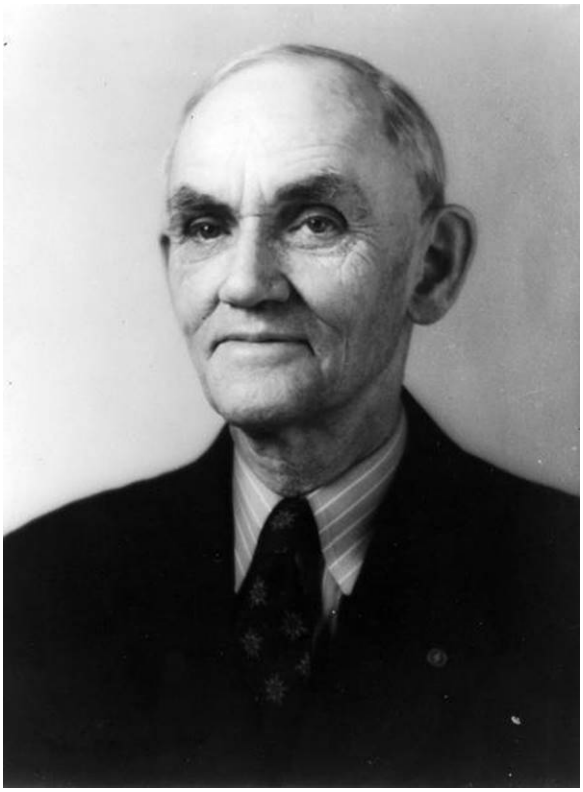


FIGURE 9. Charles E. Brown, head of Wisconsin Historical Museum and long-time editor of *The Wisconsin Archeologist* (*Courtesy of Wisconsin Historical Society*)

natural reserve, Lewis nevertheless knew how to network. Thus, as a result of his involvement in the WAS and the Central Section, Lewis's circle of professional friends and acquaintances expanded to include Charles E. Brown (Figure 9), MPM staffers Alton K. Fisher, W.C. McKern (Figure 10), and Towne L. Miller, as well as others outside the state such as Thorne Deuel (University of Chicago), Eli Lilly and Glenn Black (Indiana Historical Society), and Carl E. Guthe (University of Michigan/National Research Council [NRC]).

Within his expanded circle, McKern in particular would come to exert a tremendous influence on Lewis, gradually transforming a collector and, bluntly put, pothunter, into a dedicated and skilled archaeologist (Dye and Hawley 2014;

Hawley and Dye 2015). McKern's legacy is well-known in Midwestern archaeology. Trained under Alfred L. Kroeber at the University of California at Berkeley, McKern conducted fieldwork in the western U.S. and Polynesia. His early career was, like Lewis's, interrupted by WWI, serving as an infantryman in the trenches of France. In 1925 he accepted an anthropology position with the MPM and through the remainder of the 1920s and into the 1930s he fronted its field operations (Rodell and Green 2004). In the process he was credited (Johnson 1948; Wittry 1959) with shifting upper Mississippi Valley archaeology to a sound, scientific footing. In 1943, he was named to direct the MPM (Lurie 1983). McKern's methodological and theoretical inclinations placed him in the emerging culture-history school, in which he also played an important developmental role through the Midwestern Taxonomic Method, which backed by the National Research Council, Committee on State Archaeological Survey, he shepherded into existence as an aid in culture classification (McKern 1939; Lyman and O'Brien 2003). He also served as the first editor of *American Antiquity*.

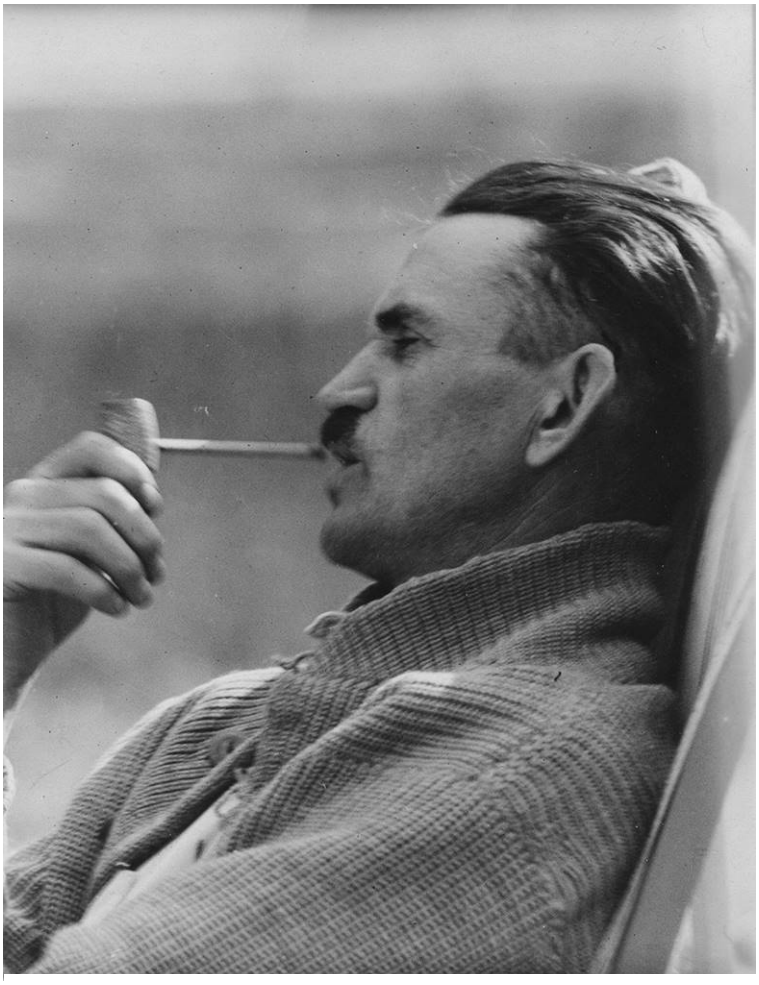


FIGURE 10. W.C. McKern in a quiet moment, Trempealeau County, 1928 (*Courtesy of the Milwaukee Public Museum*)

Lewis was fortunate to have met McKern early in his multi-year MPM initiative that involved excavating a series of mound sites (Rodell and Green 2004). McKern and an MPM crew spent several weeks in the summer of 1927 exploring the Nitschke Mound Group in Dodge County (McKern 1928, 1930), not too far north of Watertown. Lewis made the drive as often as he could for the duration of the field work (Lewis 1927a, b). Subsequently, Lewis visited McKern's later digs, including the Schwert Mounds in Trempealeau County in 1930 and in 1931 and the Raisbeck Mound Group in Grant County, occasionally camping (once with his wife in tow) and spending several days at a time as a volunteer (Crawford 1972:2; Lewis 1930a, 1930b, 1931b). The Schwert Mounds and Raisbeck Group were Middle and Late Woodland mound groups, respectively (McKern 1931, 1932). That he frequented other of McKern's digs is entirely possible, but cannot be inferred from the available

FIGURE 11. Sites Explored by T.M.N. Lewis in Wisconsin

documentation. Beginning in 1930, Lewis and McKern began a regular and wide-ranging correspondence that persisted through the duration of their respective careers (Dye and Hawley 2014; Hawley and Dye 2015).

Perhaps inspired by McKern's fieldwork, and certainly driven by his own mounting impatience with surface collecting and purchase of artifacts, that same summer Lewis began to dig on his own. Not surprisingly, and like most contemporary professional archaeologists in this era, the state's distinctive conical, effigy, and geometric mounds were the initial draw; MPM field crews, for instance, excavated between 200 and 300 mounds alone between ca. 1918 and 1932 (Fisher 1932). Lewis, with two associates, dug intersecting, perpendicular, trenches through a small, conical mound and trenched across a linear feature that extended away from the mound in the Collins (Stafeil) Mound Group, a Woodland site located a short distance southeast of Watertown (Lewis 1927c). Additional survey followed, but Lewis does not seem to have dug again until 1929, when he "examined" five or six mounds "on the east bank of the Rock River," probably in the Point Opposite Mound Group at Hustisford, Wisconsin.

To Brown, he (Lewis 1929b) reported that he "was rather disgusted … due to the lack of artifacts and other features" in the Hustisford mounds. His investigations did not end with this site, however, as he also proceeded to trench through 11 mounds of the Heger Mound Group, also just a few miles from his home as well (Anonymous 1929a:167; Brown et al. 1934; Lewis 1929c) (Figure 11). Evidently, Lewis was less than thorough in these latter excavations, as in the summer of 1933 when a local collector found a portion of a cranium, and after consulting with the MPM, in follow-up work recovered part of a child's skeleton and shell beads. As a result of the finds, Earl "Bud" Loyster and Towne L. Miller, representing the MPM, visited the Heger group, concluding that: "All of them [the 11 mounds] have been dug into [by] unknown parties" (Anonymous 1934b:44). That MPM staff was unaware of Lewis's dig is perplexing, but the real irony is that in 1937 Loyster, on McKern's recommendation, took a lab position under Lewis at the University of Tennessee and later served as a Chickamauga Basin field supervisor.

Unprepared for the sheer volume of the Tennessee assemblages, which easily dwarfed any of those recovered by the MPM digs, Loyster was soon overwhelmed and finally replaced in June 1938 by Madeline D. Kneberg, a University of Chicago doctoral student and former instructor at Beloit College (Sullivan 1994, 1999).

In 1929, as well, Lewis spent a few days digging at what is now known as the Aztalan East site, a complex - possibly Mississippian - site on the Crawfish River opposite Aztalan, which he reported some years later (Lewis 1954). At the site, he recovered pottery and human skeletal remains. Around the same time, he ventured over pre-modern roads several hours drive from Watertown to the Wisconsin River valley in Sauk and Dane counties, where he trenched two mounds, one an effigy mound, inferentially, part of the Kruger Creek Group and the other a large, bluff top, conical mound opposite Sauk City and almost certainly associated with the East Bank Mound Group (Lewis 1929d). In 1929, after meeting Halvor Skavlem, a noted avocational archaeologist and flintknapper (i.e., Pond 1930), Lewis contemplated undertaking survey around Lake Koshknonong, Skavlem's stomping ground for many years, and an area rich in effigy mounds and other archaeological sites (Lewis 1929a, 1929e). Nothing seems to have come of this, but in September 1930, following a suggestion by Brown, Lewis and another collector spent a couple of days excavating a shaft somewhere along the Wisconsin River in search of a fabled, "lost," Winnebago (Ho-Chunk) cave in Richland County. Other than blisters perhaps and a brief mention in a story about the cave in the *Milwaukee Journal*, the effort proved fruitless (*Milwaukee Journal* 1930) (see Figure 11).

If not always thorough perhaps, Lewis was at least tolerably observant in his excavations, reporting to Brown (Lewis 1929f), for instance, after the Heger mound dig, "The original humus line was not discernible in any of the mounds, nor was there any stratification whatever." His early reports are sketchy, lacking in maps, profiles, and other critical data necessary to otherwise evaluate the quality of his work. McKern (1927) advocated two methods to investigate mounds: trenching and complete removal, with the former employed most often, probably as a time and cost saving measure (Rodell and Green 2004:35). His methods were not reported at all in his brief reports to Brown, beyond the use of such general terms as "trenched", for example. The use of intersecting trenches at the Collins Mound Group was probably picked up from the MPM digs. The focus of Lewis's own digs remained unabashedly the recovery of artifacts and in this he was successful. To his credit, he readily shared the fruits of his excavations, though; for instance, Alton K. Fisher and his colleagues (1931) illustrated human crania with dental pathologies from the local mound groups in Lewis's collection. Additionally, over the years Lewis donated material from both local sites and from sites in Arkansas, Florida, and Kentucky, to the Milwaukee Public Museum (n.d.).

Far from turning away from his principal passion in these years, Lewis only seems to have intensified his pursuit of artifacts. The mode of acquisition began to change, though, inferentially due to McKern's influence. For instance, in 1931 he was listed in *The Naturalist Directory* as a collector of "Prehistoric Indian Artifacts" (Cassino 1931:215) who was also willing to trade items, but not buy or sell. He was listed the following year as well (Cassino 1932:119). In 1933, a year

which proved to be a pivotal one in his maturation and his turn toward scientific archaeology, Lewis (1933c) sheepishly admitted to McKern that he had a new subscription to *Hobbies*, a Chicago-based magazine for collectors of everything from artifacts to stamps. Again, he sought to use the magazine as a platform to inform. Dismayed by the attention of many of its readers in Folsom points, he could not refrain from attempting to dispel what he thought was a serious misconception about the type, dispatching a letter for the May 1933 edition entitled, "More about the Folsom Point," (Lewis 1933d). He asked McKern to vet the draft:

> *Will you mind looking over my contribution to Hobbies regarding the Folsom fiddlesticks and if you think I am presupposing too much, just consign it to the waste-basket. I am no one to say that the matter doesn't deserve further consideration, but it seems to me that the idea is not only ridiculous but has also been definitely disproven.*

Folsom points, following their discovery at the Folsom site in New Mexico in 1927, had subsequently been reported throughout the eastern United States, though mostly in surface contexts which clouded assessment of their age. Moreover, many lanceolate-shaped bifaces were unfortunately interpreted as Folsom points. McKern (1935, 1942) was skeptical of the type, believing, as he responded to Lewis that, "The Folsom type of point is quite common in some sections of the country... and was unquestionably made in late prehistoric times by some of our Indians" (McKern 1933a). The argument Lewis put forth closely mirrored McKern's ideas, showing again that Lewis was absorbing much from his friend and mentor.

Controversy at Wickliffe

To his friend Charles E. Brown, Lewis remarked in 1929 that, "I haven't looked over a campsite outside of the state of Wisconsin since 1927 and I think that there is more truth than poetry in the old adage which says that 'far fields are ever greener'" (Lewis 1929a). Lewis was probably alluding to a trip in 1927, wherein he purchased a collection of partial and complete Mississippian vessels from a farmer who had found them washing from a site being eroded by White River in Independence County, Arkansas (Milwaukee Public Museum n.d.). This effort may have coincided with a business trip to the new Texarkana branch, in far southwestern Arkansas, which also afforded the opportunity to roam parts of east Texas in pursuit of artifacts (Lewis 1931c). By the early 1930s, as his comment indicates, his acquisitive gaze had turned southward once again. Through the opportunities afforded by the company, as well as his own ample financial resources, Lewis was in an enviable position to assuage his archaeological yearnings. For instance, in 1930 after reading Swanton's (1922:144-150) monograph on the Creek and the dearth of information regarding the Pensacola tribe discussed therein, he and Kenneth Hawkins, one of the G.B. Lewis Company managers, who had formerly been a newspaperman in Pensacola, Florida, drove there for the purpose of excavating a mound on the Gulf Coast's Santa Rosa peninsula that had been exposed by the late July 1926 Nassau hurricane and with which Hawkins was familiar (Lane 1930; Lewis 1931b, 1936). The two men readily found and dug the remaining portion of a large, low mound at the Eighteen-Mile Point on Santa Rosa Sound site (the name derives from

FIGURE 12. Fort Walton culture, Port Washington Incised bowl, excavated and reconstructed by Tom Lewis in 1930 from the Eighteen-Mile Point on Santa Rosa Sound site, Santa Rosa County, Florida (*Courtesy of the Milwaukee Public Museum*)

Lewis's [1931b:123] description: "Eighteen miles up the Sound…"; the exact location is not known; Florida Department of State, Division of Historical Resources 1995; Willey 1949: 209-210). From it, the men recovered complete and fragmentary pottery vessels, shell beads, and skeletal remains (Herron 2012; Lewis 1931a) (Figure 12).

"Prof. Lewis," as the newspapers (and radio station) in Pensacola referred to him, unhesitatingly ascribed the remains and artifacts to the historic Choctaw, based on inferred evidence of cranial deformation. The site was later assigned to the Fort Walton culture by Willey (1949:209-210; Herron 2012), following study of photographs of pottery from the mound supplied by Lewis long after the fact. Lewis, Hawkins, and their local host took in some fishing as part of their expedition and after ten day's absence were reported as missing by the local sheriff (*Pensacola Times* 1930). The press, Lewis (1936) later claimed, made so much of the loss of the men and, after they had returned, exaggerated their discoveries to the point that he and Hawkins felt it prudent to flee town for fear of being robbed. Lewis probably aggravated the situation with his initial claim that the decorative motifs on the pottery exhumed suggested connections to ancient Egypt and the Near East (Lane 1930; *Watertown Daily Times* 1930). Back home, Lewis was schooled in pottery reconstruction by MPM staff member, Eldon G. Wolff, and then set about reconstructing some 20 or so broken vessels removed from the Santa Rosa mound (Lewis 1930b, 1931b:127, 1933e; cf. Wolff 1939) (Figure 12). Herron (2012:84), who reported on the site some 80 years after its excavation, comments that, "While Lewis did not leave a detailed description of the site and the materials uncovered, what he did record based only on [an] extremely small sample … was mostly accurate."

In shifting the focus of his archaeological interests to the south, Lewis soon crossed paths with Paducah, Kentucky-based lumberman and avocationalist, Fain W. King (Ross 1931) (Figure 13). Quite possibly Lewis saw King's listing in *The Naturalist Directory*, as several of his friends at the MPM, including Towne L. Miller and Huron H. Smith, were also listed for their respective interests (which did not include collecting). King was listed in both the 1929 and 1930 editions as a collector of "Indian Relics" (Cassino 1929:63; 1930:78). In other words, some collectors were using it to find persons of similar interests in their areas. Another possibility is that Lewis learned of King from MPM director Samuel A. Barrett, who was among a number of museum people King had reached out to in the early 1930s and with whom he kept in touch (King 1932a). In any event, Lewis initially thought he had found a kindred spirit in King (as he hinted in a letter to McKern [Lewis 1933f]): a

committed avocationalist and collector. When King invited him to participate in mound explorations along the Ohio River, Lewis leapt at the chance. Lewis's experiences in the field with King over the next couple of years, refracted in particular through the lens of his friendship with McKern, constituted an important catalyst in his evolution from collector to archaeologist (Dye and Hawley 2014). In September 1931 the small field party assembled by King, which included Lewis and Walter B. Jones (Figure 14), visited several localities and examined, "numerous large mounds in western Kentucky and western Tennessee," excavating in a group (probably McLeod's Bluff) near Clinton, Kentucky. Near Barlow, Kentucky, the group also dug part of a camp site in a cornfield (possibly, though, not certainly the Twin Mounds site) "abundantly covered with potsherds" (Lewis 1932a:42). A few miles from Moscow, Kentucky, the group looked over portions of what appeared to be part of an ancient canal that was said to be on the order of three miles in length (see Funkhouser and Webb 1928:79).

Elated by the experience, the next year, 1932, Lewis worked at the famous Mississippian Wickliffe site in western Kentucky (Figure 15) alongside David L. DeJarnette, James Hays, and Walter B. Jones of the Alabama Museum of Natural History (Wesler 2001:18-19). As Lewis set the scene:

> *Here, in the late summer and fall of 1932, a staff of archaeologists excavated portions of a prehistoric village site which has since become known to the public as the "Ancient Buried City." Obviously the term "city" is a misnomer insofar as modern standards are concerned…. That the site was not merely a temporary abiding place for some nomadic tribe is assumed from the fact that the camp refuse extends to a depth of from three to five feet over the entire site…*

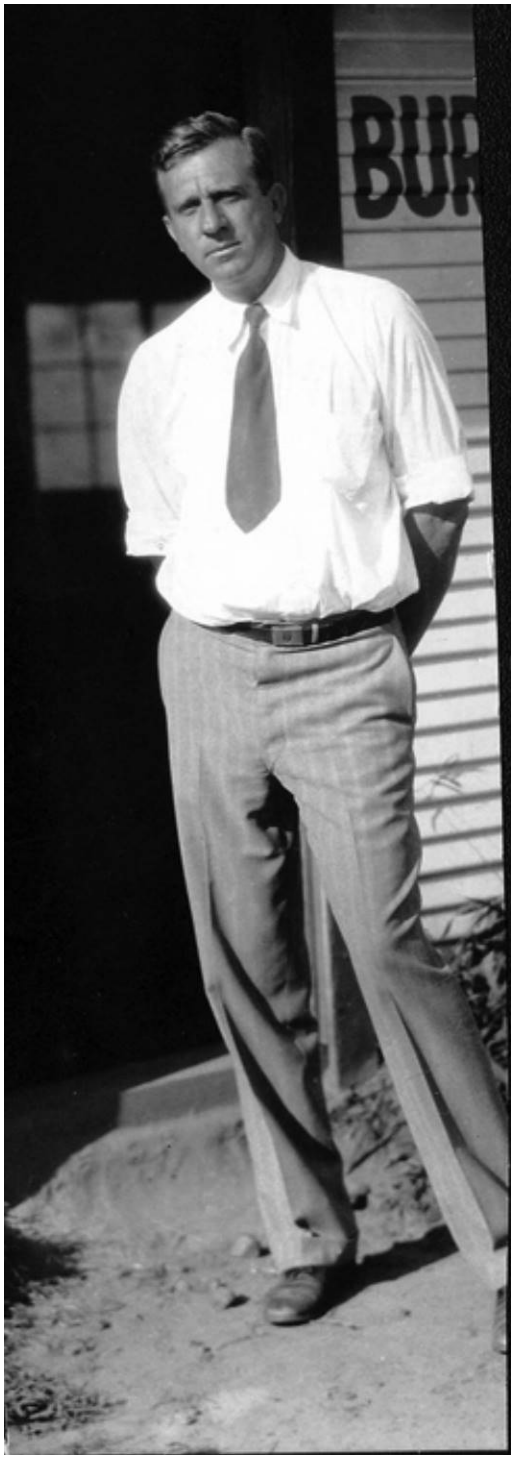


FIGURE 13. Fain W. King, 1933, at the door of the Burial Mound, Wickliffe Site, Kentucky (*Courtesy of Frank M. Bodkin*)

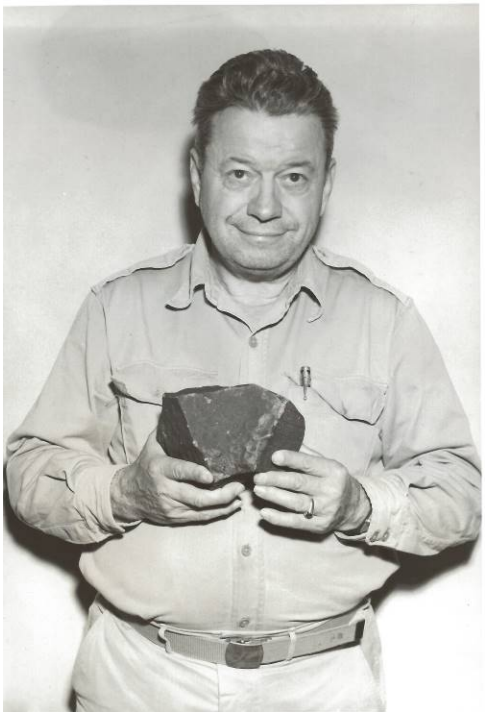


Figure 14. Walter B. Jones, geologist and archaeologist for the University of Alabama (*Courtesy of University of Alabama Museums*)

The abnormally high bluff [overlooking the Mississippi River] at this location afforded a point of vantage from which it was possible to survey a great expanse of land and water (Lewis 1934:25)

Lewis described the excavations by noting that:

To shelter the excavators from the weather a circus tent was pitched over that portion of the site which was staked out for excavation. The work continued incessantly seven days a week until the approach of winter. All remains were left in situ with the exception of that portion of the pottery which was encountered in a broken condition and which was later replaced in original positions after restoration. In all, excavations were made in three mounds. The work was so intelligently performed and the remains of such an interesting character that Mr. King decided to have substantial buildings constructed over each one of the three excavations…. To recover his investment in land and buildings a nominal admission charge has been asked of all visitors (Lewis 1934:26).

Figure 15. The Temple Mound at the Wickliffe Site, Kentucky. The Mississippi River can be seen in the background. (*Courtesy of Frank M. Bodkin*)

FIGURE 16. Sites explored by T.M.N. Lewis in the eastern U.S. prior to 1934

In his subsequent descriptions of the artifacts and other details of the site, Lewis hewed closely to the facts, displaying an understated command of his topic.

After the field work wrapped up for the season at Wickliffe, Lewis went off on his own and explored sites in Arkansas. The *Blytheville Courier News* (1932a:1), which identified Lewis as a "manufacturer, patron of museums of natural history and collector of prehistoric artifacts," indicated that he investigated mounds on the Little River, a tributary of the St. Francis River that snakes through the northwestern part of Mississippi County. In all likelihood he visited the Walnut Mound site, partially excavated by DeJarnette and Jones from the Alabama Museum of Natural History, and a crew of local diggers the previous year, prior to their visit to Hickman County, Kentucky, where they scouted and tested sites with King and Lewis (Knight 1993:622; Lewis 1932a; Tuscaloosa News 1931). On the same trip, Lewis apparently also excavated a site in Crittenden County, probably the heavily-looted Bradley site, from which he recovered 25 partial or complete vessels "associated with burial[s]. All skeletal material poorly preserved due to moisture content of alluvial soil. Burial ground on slight ridge. All vessels located at head" (Milwaukee Public Museum n.d.; also see Figure 16). Finally, and probably on the same trip, as well, west of Hughes, in St.

FIGURE 17. William S. Webb, physicist and archaeologist (*Courtesy of William S. Webb Museum of Anthropology, University of Kentucky)*

Francis County, Arkansas, he dug a single test pit into a mound and from it collected a nearly complete, restorable pottery bowl (Milwaukee Public Museum n.d.). Back in Watertown, he once again devoted his time in the arduous task of piecing together pottery from his Arkansas trip, as well as a substantial portion of the pottery vessels dug that season at Wickliffe (Lewis 1932b).

Although Lewis was heavily invested in King's project, the professionals of the era were not so enamored of either King or his efforts (Wesler 2001:21-27). King's problems sprang from several rather sensational stories sparked by the writings of a *Chicago Daily News* reporter about the site that began to appear in newspapers across the country. In these, the site was breathlessly compared to Tutankhamen's tomb and the ruined Khmer city of Angkor (Time 1933:45; cf. Lewis 1936). The lurid tales of riches at the site provoked the notice of the Science Service, a media service that cooperated with the NRC Division of Anthropology and Psychology to investigate extraordinary claims of anthropological and archaeological interest (Davis 1930). The Science Service immediately contacted its man "on the ground", William S. Webb (Figure 17), for comments. Webb responded: "Press reports greatly exaggerated. No special scientific significance to recent finds. Attempt is being made to duplicate Don Dickson, Louistown [sic], Illinois, excavation. Publicity entirely for commercial purposes" (quoted in Davis 1933). Webb had no "on the ground" knowledge of the site, though, and may have been partly informed by C.B. Moore's testimony from 1915-6, in which he noted that "careful digging …failed to find artifact or burial" at the mounds (Morse and Morse 1998:508). While wrong about the site's importance, Webb was correct, however, in that King (1932b) did draw inspiration from Dickson's lead in Illinois, as King himself had previously acknowledged to Webb. The construction of buildings over portions of the site, including mortuary areas, served a practical function as they also allowed year round excavation. King did charge admission, however, and this fact together with Webb's potent criticism were taken by the professional community of the day as signaling a major shift in King's interests to take advantage of the pecuniary aspects of his work at Wickliffe.

Fronted largely by Carl E. Guthe (as chairman of the NRC, Committee on State Archaeological Surveys) and seemingly at Webb's instigation the small professional community of the day turned against King. The profession at the time struggled for intellectual respectability (Judd 1929) and this entailed a commitment to professionalism, which necessitated pruning some of the wilder branches of what passed for archaeology, including

King's apparent turn toward commercialism (which Lewis [1934] and King perceived as a reasonable means to recoup operating costs incurred in the creation of an educational facility). The dispute, though, was probably as much as anything about demarcating boundaries in what was not only acceptable but also in asserting the authority of the profession, on the state and national levels, to pronounce upon such matters (Gieryn 1983; Zerubavel 1993). As Lewis informed King, others, such as Don Dickson in Illinois, had successfully combined scientific conservatism with commercialism, but largely by accepting "the limits allotted him" by the profession (Lewis 1933f). Although roundly decried in the post-NAGPRA era (e.g., Gulliford 1996:126-127), the profession was far more ambivalent toward such displays at the time. Indeed and without a hint of irony, even as he lashed out at King, allegedly for just this sort of thing, Webb himself (1932) promoted the idea of *in situ* mortuary exhibits, for instance, after the discovery of burials in Horse Cave, Kentucky. Other excavations were also conducted with the explicit aim of creating archaeological museums, often with *in situ* burials and admission charges. In 1936 and 1937, Lewis and his field supervisors conducted excavations at the Mound Bottom and Pack complex in Middle Tennessee with the objective of developing a state park and wayside museum near Nashville (Moore et al. 2014). Lewis was almost certainly influenced by his earlier association with King at Wickliffe. In 1938 Arthur R. Kelly (1938a, b) proposed and later established a museum at Ocmulgee National Monument. Likewise, the Mound State Monument museum was opened in 1939, based on prior New Deal excavations. Finally, Charles H. Nash, a protégé of Lewis in some respects, sent one of his field supervisors, George A. Lidberg, to T.O. Fuller State Park in south Memphis in 1940 and 1941 to conduct excavations for a proposed museum with the anticipated name of Muskhogee Archaeological Park (Hawley and Dye 2011). Unfortunately, the museum would be delayed until Nash returned to establish the Chucalissa Indian Village in 1956.

As much as anything, personal animosities appear to have been a factor in the situation at Wickliffe, in particular, between King and Webb. Webb channeled highly critical information about King to Guthe, who then, despite acknowledged errors in some of that information, broadcast it widely in a harshly worded memorandum dispatched to more than 100 archaeologists and museum people (Guthe 1933). The goal of the NRC, and especially Webb, was no longer simply the censure of unwanted behavior; as Guthe (1933) put it: "I have a feeling that the name of Fain King and Wickliffe, Kentucky, are all finished as far as professional archaeological work is concerned." One important observation to be stressed is that neither Guthe nor even Webb ever visited the site. The attempted censure was not based on first-hand observation, but this fact did not prevent Guthe from arguing at a small professional gathering in Chicago in December 1932 that King and his work did merit respect from or the support of the profession.

Inevitably, and to his mounting consternation, Lewis found himself involved in the controversy. Initially, he tried to be the mentor to King that McKern had been to him, even assisting King in drafting letters responding to the accusations leveled against him by various parties (Lewis 1933g). For Lewis,

there was one positive; as the controversy unfolded, Webb proffered him as a suitable intermediary between the profession and King (Wesler 2001:23). Professional recognition from Webb was small consolation, perhaps, and to McKern, Lewis acknowledged that:

> *This situation [with King] which has developed is pretty much of a shock to me and I am satisfied that it is all the result of his lack of contact with the profession. He is apt to discredit my advice as coming from a mere amateur and, while he has associated himself with Dr. [Walter B.] Jones to a considerable extent, Dr. Jones is inclined to be a bit reticent when it comes to a matter of expounding the ethical phase of the situation. My frequent contact with you has enabled me to comprehend this most important aspect [i.e., commercialism] pretty thoroughly, thanks to your kindness (Lewis 1933h).*

He concluded: "I believe he [King] will now recognize the line of demarcation between commercial and scientific projects...." King, however, was a former businessman and was no shrinking violet; while contrite at times, he also challenged Webb about the facts of the charges leveled against him (King 1933a, b). Ultimately, King had the personal resources to keep going at Wickliffe, in spite of Webb and the NRC. Despite involvement in excavations by the University of Chicago in the mid-1930s, King's relations with the professional community continued to deteriorate (Wesler 2012). . By early 1933, Lewis was beginning to weary of the quarrel and informed McKern: "This is one of the most irrational controversies it has ever been my misfortune to have participated in and I think it behooves me to withdraw gracefully" (Lewis 1933g).

Purgatory

Having glimpsed the Promised Land, as it must have seemed, Lewis found himself back in Wisconsin, plunged into a kind of purgatory. It was a time of great ferment for him as he used the occasion to take a hard look at his future options. In the near term, Lewis focused his attention, halfheartedly, on Wisconsin archaeology and went out to nearby Aztalan, a large, prominent -- dare it be said, Wickliffesque? -- Middle Mississippian town on the Crawfish River in Jefferson County, and, as he put it, "turned over a bit of dirt." For his effort, he came up with a portion of a human cranium, other bones, and some pottery (Lewis 1933i). He also commenced cataloging his burgeoning collection, using the MPM's cataloging system as a template (Lewis 1933j; McKern 1933b).

Wickliffe was far from forgotten, however, as he fretted over the details of an educational flyer about the site that he was writing on King's behalf (Lewis 1933k; Lewis and King 1933, 1934). Lewis, in fact, went to Wickliffe for two weeks in early fall 1933 to finalize details of the publication (King 1933c). His own articles on the site, which were published in *The Wisconsin Archeologist* and later, with only slight changes, in *Kentucky Progress Magazine*, were also probably collaborations between the two men. After Webb effectively blocked publication of an article by King about the site in the latter magazine in early 1933 (Webb 1933; Anderson 1933), Lewis published the two slightly different iterations of the article under his own name without interference (Lewis 1933b, 1934). Guthe, Lewis (1933k) informed McKern, praised the flyer.

Possibly in conjunction with his trip to Wickliffe, Lewis again travelled to

northeastern Arkansas, where he met Richmond E. "R.E." Fletcher, a well-known Osceola collector, landowner, and real estate agent. Fletcher had earlier in the year assisted the University of Arkansas Museum's Samuel C. Dellinger and Walter B. Jones and his crew from Alabama in arranging access to the Nodena phase sites in Crittenden and Mississippi Counties in 1932. He had also recently donated more than 80 artifacts (including many pottery vessels) to the Alabama Museum of Natural History (AMNH) (*Fayetteville Daily Democrat* 1932; *Blytheville Courier News* 1932b, 1932c; Durham 1989; Jones 1989; Knight 1993:627). During Lewis's visit, Fletcher gave him six Mississippian vessels that had been left behind by pot hunters looting a Mississippian site in the vicinity of Osceola. Dellinger would not have approved. As the organizer of the anthropology collections at the University of Arkansas museum and instructor of anthropology courses, Dellinger had come to deplore the looting of sites and dispersal of Arkansas artifacts to non-Arkansas institutions. Indeed, the incursions by Jones and his associates were an irritant to Dellinger and no doubt was a factor in the collaboration between him and the Alabama crew. As time passed, Dellinger turned his efforts to secure NRC backing for the cessation of work in the state by the AMNH (Mainfort 2008). In any case, Lewis did not stop with the gift of pots but possibly at the same site, which he described as "a Mississippi River Bottom site a few miles south of Osceola, Arkansas" (Lewis 1946) (see Figure 16), and collected another eight vessels or parts of vessels. Unfortunately, the limited information in the MPM accession records makes it unclear if it was the same site or another in the area. Lewis later donated these to the MPM (Lewis 1946; Milwaukee Public Museum n.d.).

Late in the year, King personally traveled to Watertown to invite Lewis back to Wickliffe; while sorely tempted, he refused the offer. Undeterred by Lewis's ambivalence, King upped the ante with the promise of a steady income (Lewis 1933l). Lewis vacillated: "I would like eventually to become identified with this Kentucky project…," he informed McKern. He held back, however, fearing, as he put it, that King was not fully committed to a scientific archaeology (Lewis 1933m). Notably in this exchange, it appears that Lewis accepted some of criticism leveled by Guthe at King at face value; however, he had no reason to doubt the sincerity of the effort to curb King's commercialism and could not have guessed that extant, contemporary correspondence between Webb and Guthe, and Webb and others suggest that factors beyond King's commercial turn were at play. In any event, Guthe (1933) opined to Webb that Lewis's effort to distance himself from King owed chiefly to his friendship with McKern and although the available correspondence is frustratingly indirect at times, inferentially, McKern must have glimpsed the danger to Lewis and his future aspirations were he to continue his association with King. In any event, with some haste, Lewis fulfilled his obligations to King by bringing the publications the two men had planned about the site to fruition. After that, he kept King—the man who initiated him into the large-scale archaeology of Mississippian sites—at arm's length, maintaining only sporadic contact with him through the 1930s (e.g., King 1939). Webb and the NRC succeeded, ultimately, only in alienating King from the profession and little more.

For much of the summer of 1933, Lewis and McKern exchanged missives

about classification and Lewis also took advantage of Guthe's growing trust in him to propose a plan for a guide pamphlet for amateur archaeologists, drafting a detailed outline of it as well (Lewis 1933n). The NRC (1930) had only a few years before published and circulated widely a *Guide Leaflet for Amateur Archaeologists*, but Lewis wanted to go much farther. He wanted to deal with artifact analysis, cataloging, and many other issues, including especially the importance of amicable interactions with professional archaeologists. Too, it was around this time that Lewis wondered to McKern, and then at McKern's urging, to Guthe, about the feasibility of creating a new organization, one strictly focused on archaeology, unlike, for instance, the AAA or the Central Section, although in the latter case archaeologists actually comprised the overwhelming majority of its membership (Isaac 2001:14). Guthe was intrigued by the idea. In December 1933, at the AAA meeting in Columbus, Ohio, the various members of the NRC Committee on State Archaeological Surveys (which included McKern and Charles E. Brown) met and discussed the proposal at length. After further inducements from both professionals and at least one noted and well-regarded avocationalist, Paul A. Titterington, at the meeting, Guthe then helped organize the new Society for American Archaeology (SAA), which was officially launched at the joint 1934 AAA/Section H of American Academy for the Advancement of Science meeting in Pittsburg. Lewis was among the signers of the SAA's constitution (Griffin 1985; Guthe 1967).

Lewis was also involved in the creation of the Watertown Historical Society (Watertown Historical Society 2013b). As the result of his contacts at the MPM, he handled the accessioning and cataloging of donated items (following procedures used at the MPM) (Lewis 1933o, 1933p). Once again, it is worth noting that his maternal grandfather had been an early supporter of the local historical society in Chambersburg (Foltz 1908:20) and that his mother was a charter member of the Watertown Historical Society. Indeed, Margaret Lewis was for several years (1938-1945) the custodian of the Octagon House, an unusual—and as the name suggests octagon-shaped—pre-Civil War mansion that had been purchased by the fledgling society, and which was opened for tours beginning in 1938 (*Watertown Daily Times* 1959). A portion of Lewis's artifact collection, comprising both pottery and stone implements, was displayed at the Octagon House for a number of years before being donated to the MPM (*Beatrice Daily Sun* 1942; Lewis 1946).

While these varied activities were, perhaps, satisfying in some respects, especially as he had been accepted by Guthe and other ranking members of the archaeological establishment, by fall 1933, however, and in response to the King-Wickliffe affair and the corrosive effects of it on his future aspirations, Lewis had grown pensive. To McKern, he remarked:

> *I have reached the point now where the commercial world has less appeal to me than it ever has had if that is possible. I desire eventually to make anthropology my profession if it will offer me an opportunity to eke out an existence for my family (Lewis 1933q).*

Having rejected King's overtures, Lewis thought he glimpsed one other possibility for an "out". To McKern, he hesitantly wondered what would be "required of me in the way of further research, classroom attendance and laboratory work to obtain an M.A. degree" (Lewis 1933m) at the University of

Chicago, where Fay-Cooper Cole was building up one of the midcontinent's major anthropology departments (Eggan 1963; Jennings 1962; Stocking 1980). The program played a major role in standardizing and disseminating field methods in the 1930s and 1940s (Howe 2011, 2015; Lyon 1996:61-62). An advanced degree from the UW was out of the question, as the UW extension office was unable to accommodate his request for a correspondence course and commuting or relocating was equally out of the question (Lewis 1933q). By December he had tentatively worked out an arrangement with the Anthropology Department at Chicago for a correspondence course (Lewis 1933r). For his part, McKern (1933c) recommended instead that Lewis remain with the company and work out an arrangement that would permit him to continue as he had.

Finally, as the year dragged to a close, with McKern, Lewis began to think seriously about a "classification-of-artifacts program," and commenced an extensive reading program on the topic (McKern 1933d). McKern, backed by the NRC, Committee on State Archaeological Surveys, was at the time fronting an effort to limn out a culture classification scheme for Midwestern archaeology, which eventually resulted in the Midwestern Taxonomic Method (MTM) (McKern 1939; cf. Lyman and O'Brien 2003). Lewis followed McKern's work closely and was at pains to apply the MTM or, as he would call it, the "McKern Classification" (Lewis and Kneberg 1939:29) to the archaeological assemblages later generated by the TVA archaeology program in Tennessee (Hawley and Dye 2015).

In 1933, after McKern rejected an offer to head up the TVA's fledgling archaeology program (Lyon 1996:40), Webb accepted directorship of the program. Trained in physics, Webb ended up teaching a course on archaeology at the University of Kentucky, where beginning in the 1920s, he and his associate, biologist William D. Funkhouser, initiated a program of archaeological research in the state (Schwartz 1967, 2015). As a result of his foray into Kentucky and his involvement with King at Wickliffe, Lewis had developed a healthy respect for Webb and, through the controversy over the site, evidently Webb for him. Early in 1934, following the passage of the Tennessee Valley Authority Act in May 1933, the TVA assumed sponsorship of archaeological investigations in the Norris Basin in eastern Tennessee. As a result of his friendship with Lewis and a recommendation from McKern, Webb asked Lewis to serve as his district field supervisor for the project through June (Lyon 1996:40; Sullivan 1999:67-68; Webb 1933). In McKern's office at the MPM, the two men carefully weighed the pros and cons of Webb's remarkable—and timely—offer (Crawford 1972:2), before Lewis accepted the position and resigned from his job with the G.B. Lewis Company. A huge gamble, in early 1934 Lewis moved his wife and daughter to Knoxville, and began what would turn out to be a new and challenging career as an archaeological supervisor in the one of the nation's largest and most demanding fieldwork programs yet conceived in the United States (Ezzell 2009; Fagette 1996; Haag 1985; Lyon 1996; Stoltman 2006).

Thomas M.N. Lewis and the Growth of American Archaeology

Thomas M.N. Lewis came of age in American archaeology during the

classificatory-historical period (1914-1940), a time when archaeological research concerns centered on artifact classification and cultural chronology (Willey and Sabloff 1993) and moved away from amassing large museum holdings of artifacts. In the late nineteenth century, William H. Holmes (1903) used whole ceramic vessels to establish classificatory categories for eastern North America, building on his earlier work with museum collections of pottery from the Lower Mississippi Valley (Holmes 1886). Although his approach allowed later archaeologists to build fine-scale ceramic typologies, his scheme lacked temporal depth. The remedy was an emphasis on new methods and techniques for placing material culture in time-ordering sequences.

Time and culture became increasingly primary objectives of archaeological concerns in the late 1930s and archaeologists soon began to implement stratigraphic and taxonomic procedures for ordering archaeological units. Archaeologists knew that to gain a sense of temporal control, they would have to craft, if not innovate and invent, refinements in excavation techniques and field methods—necessary components for stratigraphic methods. In short, archaeologists were increasingly concerned with how to investigate the time-depth and culture change over a given interval of time. Lewis's entry into professional archaeology came just prior to these formative developments.

A major turning point in Lewis's thinking about the conduct of archaeology and his approach to prehistory came after he began to affiliate with professional archaeologists in Wisconsin through the WAS, but even then he would not begin to think professionally until 1932-3, when he began to publish on his explorations in Kentucky and Tennessee. The papers were prompted by his work in Kentucky with King and his association with, among others, David L. DeJarnette, with whom he had worked in the fall of 1932 at the Wickliffe site. DeJarnette had been enrolled in the University of Chicago field school in Fulton County, Illinois, immediately prior to the Wickliffe excavations (Knight 1993). At the summer field program, run by Thorne Deuel, DeJarnette learned newly emerging techniques such as horizontal stripping, vertical trenching, plane table mapping, and field excavation record-keeping (Howe 2011, 2015). The year Lewis joined the WAS, was the first year of the University of Chicago field school, held in northwestern Illinois, and in those six years from its founding in 1926 to DeJarnette's summer enrollment in 1932, the field school had made great strides. It is unknown what Lewis learned from DeJarnette, but knowing his curious and inquisitive mind and his family's proclivity (at least in the business world) to innovate and adapt, it is difficult to image that he did not come away from the experience without an awareness of the new field methods being taught and the research questions being asked. His association with McKern only reinforced these experiences.

The state of Midwestern archaeology at the time of Lewis's entry into the profession might be best summed-up in a letter written by W. C. McKern on October 27, 1932, to Carl E. Guthe, chair of the Committee on State Archeological Surveys of the National Research Council, "To me one of the outstanding characteristics of American archaeological research is its total lack of standards" (quoted in O'Brien and Lyman 2001:55). To remedy this situation, McKern and a group of other archaeologists met in May

1932 at the annual meeting of the Illinois State Academy of Sciences in Chicago. At that meeting McKern presented some early thoughts of a classification system that would be revised at meetings of the Central Section and in December 1935 at the Indianapolis conference hosted by the NRC. The methodology became known as the Midwestern Taxonomic Method (aka McKern Classification) (Hawley and Dye 2015; Lyman and O'Brien 2003:55; McKern 1939). The primary purpose of the MTM was to establish methods and terminology, given the current lack of standardized field and laboratory methods, for classifying and describing artifacts from the upper Midwest. The end result would be an analytical method that would allow archaeologists to compare their research with one another and enable them to reconstruct culture histories over a large area.

Through their friendship, McKern exerted a tremendous influence on Lewis and mentored him during his formative years, not only through the developing analytical methodologies, such as the MTM, but also through his patient encouragement and tutelage (Dye and Hawley 2014; Hawley and Dye 2015). In July 1937, an exchange of letters between the two men perfectly catches the character of their friendship and the road that Lewis had travelled since their first meeting almost a decade earlier. It was three and half years after Lewis had moved south, and now at the University of Tennessee, he was immersed in the day-to-day struggle of administering large New Deal field crews and laboratory for the TVA. From afar, McKern (1937) had watched his progress and felt compelled to observe that:

> *As you may realize, I used to be rather skeptical of your work here in Wisconsin, although I always had a lot of respect for you personally. However, your efforts in the Southeast have satisfied me that you and your work are good. I am willing to stack your technique up against that of any field research man in the country, admitting that neither you nor any one of the others is perfect…. Keep up the good work with your chin up, and you will find yourself in the upper stratum just so long as you are willing to learn; and that is all I can say for anyone.*

In an equally reflective mood, Lewis (1937) responded:

> *With regard to the nature of the techniques which are being employed here, I can only say this: No other investigator could be any more interested in his problems than I, and anyone who is really interested in what he is doing is bound to achieve something usable in the way of results. The hours which I have been so fortunate to be able to spend with you are largely responsible for what clear thinking I am capable of exercising. As a matter of fact, I am typing this letter in my trailer now and finding this world a good place in which to be only because you did go to the trouble to talk sense into me a few years ago in that kindly, convincing sort of manner of which so few people in this world are capable.*

Conclusion

Thomas M.N. Lewis has been all but forgotten for his role in American archaeology, partly because he did not have the requisite degrees or graduate students who would stand as testaments to his academic career. For much of his early professional career, Lewis spent the bulk of his effort and time wrangling with the federal New Deal programs and keeping the University of Tennessee archaeology program afloat, first during the Great Depression and then through the war years. And then from 1944 to 1961, a period during which he also cared for his aging mother (*Watertown Daily Times* 1959), he created and kept running the Tennessee Archaeological Society (Smith 2015). All the while, Lewis

continued his involvement with the Southeastern Archaeological Conference until he retired and he also maintained ties to the Wisconsin Archeological Society, which in fact awarded him its Increase A. Lapham Award for contributions to anthropology in 1946 (Figure 18), most likely for the *Hiwassee Island* report. Likewise, he remained active in the Central Section, even serving on its executive committee through much of the 1940s (Isaac 1980: Table 6).

By the end of his active career, Lewis may not have had a long string of publications, but those he produced with his long-time colleague and later spouse, Madeline D. Kneberg, were substantial productions based largely on the New Deal federal work relief program excavations (Lewis and Kneberg 1946, 1947, 1958, 1959; Lewis et al., 1995; Lewis and Lewis 1961). Lewis was instrumental in founding the Society for American Archaeology despite his lack of any formal training as an archaeologist. He also co-authored *Hiwassee Island* with Madeline D. Kneberg (Lewis and Kneberg 1946), which received rave reviews from one of his most stringent critics (Jennings 1947) and his staunchest champion alike (McKern 1947).

FIGURE 18. Lapham Medal Awarded to T.M.N. Lewis in 1946 by the Wisconsin Archeological Society; upper obverse and lower reverse.

Acknowledgments. We are extremely grateful to Tom Lewis's daughter, Nancy, and her husband Frank Ladd for information about her father, encouragement to pursue our interest in his career, and for permission to include some of her observations into the manuscript. Judith Coker, Lewis's niece, provided the portrait of the Lewis family. Brenda Tindall, Archivist at Princeton University, sent us information about Lewis's course of study there, as well as his GPA. Ken Reidl and the Watertown Historical Society granted permission to use two images; their website, especially the section on the history of the G.B. Lewis Company, was most helpful to us. Also with the Watertown Historical Society, William Jannke tried to find interior views of the Octagon House showing Lewis's collection on display; however, none have been found. Information about Lewis's friendship with McKern and others connected with that institution derives from the Milwaukee Public Archives and we would like to acknowledge the efforts of former archivist Susan Otto for assistance in locating and copying correspondence between the two men. Additionally, Dawn Scher-Thomae provided copies of accession records documenting some of Lewis's donations; we are also indebted to her for notice of Ciera (née Herron) Fisher's recent thesis on the Eighteen-Mile Point site dug by Lewis in 1930. Ciera Fisher then provided a digital copy of her thesis. Also at the MPM, Claudia Jacobson and Sara Podejko assisted with photographs and other information. WHS Archives staff assisted

with access to the Charles E. Brown and WAS papers. Leslie Brunner, of the Menasha Corporation, supplied information about records (or rather the lack thereof) pertaining to the G.B. Lewis Company.

In regards to Lewis's membership in the Central States Section of the American Anthropological Association, we would like to thank Pamela Effrein Sandstrom and Barry L. Isaac for sharing documentation on the early history of what is now the Central States Anthropological Society. Ruth Gembe, Coyle Free Library, Chambersburg, Pennsylvania provided a copy of Thomas M. Nelson's 1919 obituary, which filled in details of his life. Kit Wesler offered up images from his book on Wickliffe and also directed us to Carla Hildebrand, Park Manager at Wickliffe Mounds State Historic Site. Frank M. Bodkin, formerly the Superintendent at Wickliffe Mounds and presently archaeologist with the Daniel Boone National Forest, U.S. Forest Service, generously provided numerous articles, correspondence, and other information about the early Wickliffe excavations that we had not previously seen, including the suggestion to look into The Naturalist Directory. Tom Klatka, Western Regional Office, Virginia Department of Historical Resources, provided general information on mound clusters in the Lynchburg area; the specific location of Lewis's mounds remains unknown. Joshua Broxson, University of West Florida Library, tracked down copies of newspaper articles about Lewis's 1930 Florida trip. R. Barry Lewis supplied the probable names of sites Lewis and King explored in 1931 on the Ohio River and Vincent "Chip" Birdsong, Florida Department of State, Division of Historical Resources, provided what little information there is on Lewis's site near Pensacola. Lydia Ellington, Collections Technician, Alabama Museum of Natural History, and Ian Brown, Chair and Professor of Anthropology, University of Alabama, assisted with a suitable image of Walter B. Jones. At the University of Kentucky, Nancy O'Malley, Assistant Director, William S. Webb Museum of Anthropology and George M. Crothers, Director, William S. Webb Museum of Anthropology, were equally gracious in permitting us to use a photo of William S. Webb. At *Tennessee Archaeology*, we would like to thank Mike Moore and Kevin Smith and also the journal's anonymous reviewer, whose comment's helped strengthen the paper. To all, we offer our sincere thanks. Finally, any errors of fact or judgment are solely those of the authors.

Archival Sources

Anthropology Department Papers, Milwaukee Public Museum, Milwaukee

Charles E. Brown Papers, Wisconsin Historical Society, Madison

CSAS Papers, National Anthropology Archives, Smithsonian Institution, Washington, D.C.

William S. Webb Papers, University of Kentucky, Lexington

Wisconsin Archeological Society Papers, Wisconsin Historical Society, Madison

References

Anderson, Barbara T.
1933 Letter to William S. Webb, February 17, 1933, W.S. Webb Papers, University of Kentucky Archives, Lexington.

Anonymous
1903 Deaths. *Lewisiana or the Lewis Letter* 14(2):30-31.
1921a Nationally Known Beekeepers. [Advertisement.] *Dixie Beekeeper* 2(11):32.
1921b Lynchburg and "Beeware". [Advertisement.] *Gleanings in Bee Culture* 49(12):740.
1924 Golden Anniversary of G. B. Lewis Company. [Advertisement.] *Wisconsin Beekeeping* 1(4):44.
1926a No Clutch to Throw In. [Advertisement.] *Wisconsin Beekeeping* 3(9):110.
1926b Archeological Notes. *The Wisconsin Archeologist* 5(3):98-102.
1927a Archeological Notes. *The Wisconsin Archeologist* 6(2):67-70.
1927b Archeological Notes. *The Wisconsin Archeologist* 6(3):97-100.
1928 Archeological Notes. *The Wisconsin Archeologist* 8(1):119-124.
1929a Archeological Notes. *The Wisconsin Archeologist* 8(4):162-168.
1929b Committees. *The Wisconsin Archeologist* 9(1):1.
1930 Archeological Notes. *The Wisconsin Archeologist* 9(2):131-133.
1931 Archeological Notes. *The Wisconsin Archeologist* 10(4):141-147.
1932 Archeological Notes. *The Wisconsin*

Archeologist 11(4):176-179.
1934a Archeological Notes. *The Wisconsin Archeologist* 13(3):76-80.
1934b Archeological Notes. *The Wisconsin Archeologist* 13(2):44-46.
1935 Archeological Notes. *The Wisconsin Archeologist* 14(4):99-101.
1943 Chert Flakings. *The Wisconsin Archeologist* 24(2):90-93.
1946 Archaeological Notes. *The Wisconsin Archeologist* 27(1):23-24.
1951 List of Members. *The Wisconsin Archeologist* 32(3):58-64.
1975 Thomas M.N. Lewis. *Anthropology Newsletter* 16(3):6.

Atkins, E.W. and Kenneth Hawkins
1924 *How to Succeed with Bees*. Democrat Printing Office, Madison, Wisconsin.

Beatrice Daily Sun
1942 Watertown, Wisconsin, Boasts Museum; Beatrice Needs One. *Beatrice Daily Sun*, September 18, 1942, p. 3. Beatrice, Nebraska.

Blytheville Courier News
1932a Student of Archaeology Visits Indian Mounds. *The Blytheville Courier News*, October, 19, 1932, p. 1. Blytheville, Arkansas.
1932b Museum Honors R.E. Fletcher. *Blytheville Courier News*, February 19, 1932, p. 3. Blytheville, Arkansas.
1932c Fletcher Sees Nodena Exhibit at Tuscaloosa. *Blytheville Courier News*, May 26, 1932, p. 2. Blytheville, Arkansas.

Brown, Charles E., T. T. Brown and Oscar Johnson
1934 Rock River Survey: Heger Mound Group. Unpublished manuscript, Charles E. Brown Papers, Box 29, WHS Library-Archives Division.

Cassino, Samuel E.
1929 *The Naturalist Directory.* [23rd edition.] Salem, Massachusetts.
1930 *The Naturalist Directory*. [24th edition.] Salem, Massachusetts.
1931 *The Naturalist Directory*. [25th edition.] Salem, Massachusetts.
1932 *The Naturalist Directory*. [26th edition.] Salem, Massachusetts.

Coffin, Selden J.
1879 *Record of the Men of Lafayette: Brief Biographical Sketches of the Alumni of Lafayette College, from Its Organization to the Present Time*. Skinner & Finch, Printers, Easton, Pennsylvania.

Crawford, Charles
1972 Oral History of the Tennessee Valley Authority: Interviews with Thomas M.N. Lewis and Mrs. Madeline Kneberg Lewis, December 19, 1972. Oral History Research Office, Memphis State University, Memphis, Tennessee.

CSAS Archives
n.d. Membership Records. Central States Anthropological Society Records, National Anthropology Archives, Smithsonian Institution, Washington, D.C. Records span 1929 to 1971.

Curti, Merle, and Vernon Carstensen
1949 *The University of Wisconsin, 1848-1925*. Volume II. University of Wisconsin Press, Madison.

Davis, Watson
1930 Scientific Minute Men in Anthropology and Archeology. *Science* 72(1857):115-116.
1933 [Untitled memorandum on Wickliffe claims.] Science Service, Washington, D.C.

Duchaine, William J.
1946 Box and Crate Engineering. *Science and Mechanics*, February, pp. 81-84.

Durham, James H.
1989 Excavations at Nodena in 1932. In *Nodena*, edited by Dan F. Morse, pp. 23-29. Research Series No. 30, Arkansas Archaeological Survey, Fayetteville.

Dye, David H.
2013 Trouble in the Glen. In *Shovel Ready: Archaeology and Roosevelt's New Deal for America*, edited by Bernard K. Means, pp. 129-146. University of Alabama Press, Tuscaloosa.

Dye, David H., and Marlin F. Hawley
2014 Mentoring Tom Lewis. *The SAA Archaeological Record* 14(4):17-22.

Eggan, Fred
1963 Fay-Cooper Cole, 1881-1961. *American Anthropologist* 65(4):641-648.

Ezzell, Patricia B.
2009 TVA: Built for the People of the United States. In *TVA Archaeology: Seventy-Five Years of Prehistoric Site Research*, edited by Erin E. Pritchard and Todd M. Ahlman, pp. 2-16. University of Tennessee Press, Knoxville.

Fagette, Paul
1996 *Digging for Dollars: American Archaeology and the New Deal*. University of New Mexico Press, Albuquerque.

Fayetteville Daily Democrat
1932 Archaeologists on Expedition near Osceola. *Fayetteville Daily Democrat*, February 3, 1932, p. 1. Fayetteville, Arkansas.

Fisher, Alton K.
1932 Discussion and Correspondence—Prehistoric Copper Artifacts. *The Wisconsin Archeologist* 12(1):26-27.

Fisher, Alton K., with contributions by Herbert W. Kuhm and George C. Adami
1931 *The Dental Pathology of the Prehistoric Indians of Wisconsin*. Bulletin of the Public Museum of the City of Milwaukee 10(3).

Florida Department of State, Division of Historical Resources
1995 Florida Master Site File: 8SR0010. On file, Florida Department of State, Division of Historical Resources, Tallahassee.

Foltz, M.A.
1908 *Retrospective: A Decade of the Kittochtinny Historical Society, Chambersburg, PA*. Repository Printery, Chambersburg.

Funkhouser, W.D. and William S. Webb
1928 *Ancient Life in Kentucky*. Kentucky Geological Survey, Frankfort.

Gieryn, Thomas F.
1983 Boundary-Work and the Demarcation of Science from Non-Science: Strains and Interests in Professional Ideologies of Scientists. *American Sociological Review* 48(6):781-795.

Gleach, Frederic W.
2009 Sociology, Progressivism, and the Undergraduate Training of Anthropologists at the University of Wisconsin, 1925-30. In *Histories of Anthropology Annual 5*, edited by Regna Darnell and Frederic W. Gleach, pp. 229-250. University of Nebraska Press, Lincoln.

Griffin, James B.
1985 The Formation of the Society for American Archaeology. *American Antiquity* 50:261-271.

Gulliford, Andrew
1996 Bones of Contention: The Repatriation of Native American Human Remains. *The Public Historian* 18(4):119-143.

Guthe, Carl E.
1933 Letter to William S. Webb, February 15, 1933, William S. Webb Papers, University of Kentucky Archives, Lexington.
1967 Reflections on the Founding of the Society for American Archaeology. American Antiquity 32:433-440.

Haag, William G.
1985 Federal Aid to Archaeology in the Southeast, 1932-1942. *American Antiquity* 50:272-280.

Hawkins, Kenneth
1920 *Beekeeping in the South: a handbook on seasons, methods and honey flora of the fifteen southern states*. American Bee Journal, Hamilton, Illinois.

Hawley, Marlin F., and David H. Dye
2011 George A. Lidberg, Jr. and Depression-Era Archaeology in Tennessee. *Southeastern Archaeology* 30:399-412.
2015 Down in the Valley: W.C. McKern as Advisor, Consultant, and Godfather for New Deal Archaeology in Tennessee. In *New Deal Archaeology in Tennessee*, edited by David H. Dye. University of Alabama Press, Tuscaloosa (in press).

Herron, Ciera M.
2012 *An Osteological and Ceramic Analysis of the 18 Mile Point Site, Santa Rosa, Florida*. Unpublished master's thesis, University of Wisconsin-Milwaukee.

Herskovits, Melville J. (editor)
1950 *International Directory of Anthropologists* (3rd edition). National Research Council, Washington, D.C.

Historical Publishing Company
1887 *Historical Review of the State of Wisconsin*. Historical Publishing Company, New York.

Holmes, William H.
1886 *The Ancient Pottery of the Mississippi Valley*. Annual Report for 1882-83, Volume 4:361-436. Bureau of Ethnology, Smithsonian Institution, Washington, D.C.
1903 *Aboriginal Pottery of the Eastern United States*. Annual Report for 1898-99, Volume 20:1-237. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Houghton, Frederick L.
1899 *Holstein-Friesian Herd-Book*, Volume XVI. Holstein-Friesian Association of American, Brattleboro, Vermont.
1915 *Holstein-Friesian Herd-Book*, Volume XXXIII. Holstein-Friesian Association of American, Brattleboro, Vermont.

Howe, Jessica R.
2011 *The Chicago Method of Excavation at Kincaid*. Unpublished Master's thesis, Department of Anthropology, Southern Illinois University, Carbondale.
2015 New Deal Archaeology and the Chicago Method. In *New Deal Archaeology in Tennessee*, edited by David H. Dye, University of Alabama Press, Tuscaloosa (in press).

Hudson, John C.
1986 Yankeeland in the Midwest. *Journal of Geography* 85(5):195-200.
1988 North American Origins of the Middlewestern Frontier. *Annals of the Association of American Geographers* 98(3):395-413.

Isaac, Barry L.
1979 CSAS History: Through Depression and War, 1931-1940, 1941-1950. CSAS Papers, National Anthropology Archives, Smithsonian Institution, Washington, D.C.
1980 CSAS History: Search for a Mission, 1950s & 1960s. CSAS Papers, National Anthropology Archives, Smithsonian Institution, Washington, D.C.
2001 CSAS History: The Early Years. http://www.aaanet.org/sections/csas/wp-content/uploads/2012/03/Isaac_Barry_2001_CSAS_History_The_Early_Years_2011-11-04_Reformatted.pdf, accessed August 20, 2013.

Isaacs, Barry L., and Mark G. Pheanis
1978 *CSAS History: The First Decade, 1921 through 1930*. CSAS Papers, National Anthropology Archives, Smithsonian Institution, Washington, D.C.

Jennings, Jesse D.
1947 Review of: Hiwassee Island, T.M.N. Lewis and Madeline Kneberg. *American Antiquity* 12:191-193.
1962 Fay-Cooper Cole, 1881-1961. *American Antiquity* 27:573-575.

Johnson, Frederick
1948 Archaeological News. *American Journal of Archaeology* 52(3):344-372.

Jones, Walter B.
1989 The Alabama Museum of Natural History Excavations at Nodena. In *Nodena*, edited by Dan F. Morse, pp. 33-35. Research Series No. 30, Arkansas Archaeological Survey, Fayetteville.

Judd, Neil
1929 The Present Status of Archaeology in the United States. *American Anthropologist* 31(2):401-418.

Kelly, Arthur R.
1938a The Need of a Museum of Southeastern Archaeology. Paper presented at the Society of Georgia Archaeology meeting, Savannah.
1938b The Coordination of Southeastern Archaeological Studies. *The Regional Review* (National Park Service, Region One, Richmond, VA) 1(1):9-12.

King, Fain W.
1932a Letter to William S. Webb, November 9, 1932, W.S. Webb Papers, University of Kentucky Archives, Lexington.
1932b Letter to William S. Webb, October 1, 1932, W.S. Webb Papers, University of Kentucky Archives, Lexington.
1933a Letter to William S. Webb, January 16, 1933, W.S. Webb Papers, University of

Kentucky Archives, Lexington.
1933b Letter to William S. Webb, February 4, 1933, W.S. Webb Papers, University of Kentucky Archives, Lexington.
1933c Letter to William S. Webb, October 24, 1933, W.S. Webb Papers, University of Kentucky Archives, Lexington.
1939 Letter to Thomas M.N. Lewis, October 17, 1939, Anthropology Correspondence Files, Milwaukee Public Museum, Milwaukee.

Knight, Vernon J., Jr.
1993 David Lloyd DeJarnette, 1907-1991. *American Antiquity* 58(4):622-625.

Ladd, Nancy L.
2012 Personal communication with Hawley, April 1, 2012, Jacksonville, Illinois.
2013 Letter to Marlin F. Hawley, July 28, 2013. Copy in possession of authors.

Lane, Thorne
1930 Choctaw Inhabited this Area, Says Excavator. *The Pensacola Journal*, June 13, 1930, p. 1-2.

Lepowsky, Maria
2000 Charlotte Gower and the Subterranean History of Anthropology. In *Excluded Ancestors, Inventible Traditions*, edited by Richard Handler, pp. 123-170. University of Wisconsin Press, Madison.

Lewis, Thomas M.N.
1926a Letter to Charles E. Brown, May 7, 1926, Wisconsin Archeological Society Papers, Wisconsin Historical Society Archives, Madison.
1926b Letter to Charles E. Brown, May 11, 1926, Wisconsin Archeological Society Papers, Wisconsin Historical Society Archives, Madison.
1927a Letter to Charles E. Brown, July 7, 1927, Wisconsin Archeological Society Papers, Wisconsin Historical Society Archives, Madison.
1927b Letter to Charles E. Brown, July 15, 1927, Wisconsin Archeological Society Papers, Wisconsin Historical Society Archives, Madison.
1927c Report on Mound Excavation near Pipersville, Wisconsin. Charles E. Brown Papers, Box 28, Jefferson County, 1920-1929.
1929a Letter to Charles E. Brown, July 13, 1929, Wisconsin Archeological Society Papers, Wisconsin Historical Society Archives, Madison.
1929b Letter to Charles E. Brown, July 24, 1929. Charles E. Brown Papers, Box 29, Sauk County.
1929c Site Report. Typescript, 1 p., image and sketch map. Charles E. Brown Papers, Box 28, Jefferson County, 1920-1929.
1929d Letter to Charles E. Brown, July 9, 1929, Wisconsin Archeological Society Papers, Wisconsin Historical Society Archives, Madison.
1929e Letter to Charles E. Brown, July 18, 1929, Wisconsin Archeological Society Papers, Wisconsin Historical Society Archives, Madison.
1929f Letter to Charles E. Brown, June 25, 1929, Wisconsin Archeological Society Papers, Wisconsin Historical Society Archives, Madison.
1930a Letter to W.C. McKern, July 15, 1930, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1930b Letter to W.C. McKern, June 28,, 1930, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1931a A Florida Burial Mound. *The Wisconsin Archeologist* 10(4):123-128.
1931b Letter to W.C. McKern, June 30, 1931, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1931c Letter to W.C. McKern, August 21, 1931, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1932a "Old Kentucky." *The Wisconsin Archeologist* 11(2):41-43.
1932b Letter to W.S. Webb, December 10, 1932, William S. Webb Papers, University of Kentucky, Lexington.
1933a Letter to W.C. McKern, October 31, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933b Kentucky's Buried City. *Kentucky Progress Magazine* 6(1):29-31, 45-46.
1933c Letter to W.C. McKern, April 17, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933d More about the Folsom Point. *Hobbies* 38(4):135.

1933e Letter to W.C. McKern, December 4, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933f Letter to Fain King, February 1, 1933. Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933g Letter to W.C. McKern, February 3, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933h Letter to W.C. McKern, March 1, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933i Letter to W.C. McKern, June 2, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933j Letter to W.C. McKern, October 9, 1933, Anthropology Correspondence Files, Milwaukee Public Museum, Milwaukee.
1933k Letter to W.C. McKern, October 20, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933l Letter to W.C. McKern, December 5, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933m Letter to W.C. McKern, November 16, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933n Letter to Carl E. Guthe, October 30, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933o Letter to W.C. McKern, May 18, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933p Letter to W.C. McKern, May 23, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933q Letter to W.C. McKern, December 12, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1933r Letter to W.C. McKern, December 11, 1933, Anthropology Correspondence Files, Milwaukee Public Museum Archives, Milwaukee.
1934 Kentucky's "Ancient Buried City." *The Wisconsin Archeologist* 13(2):25-31.
1936 Should We Damn the Press? *American Antiquity* 2:38-40.
1937 Letter to W.C. McKern, July 16, 1937, Anthropology Accession Files, Milwaukee Public Museum, Milwaukee.
1946 Letter to W.C. McKern, August 3, 1946, Anthropology Accession Files, Milwaukee Public Museum; Appendix H in Herron 2012:142-143.
1954 Mound Group opposite Aztalan. *The Wisconsin Archeologist* 35(1):37-41.

Lewis, Thomas M.N., and Fain W. King
1933 Fascinating Discovery of an Ancient Buried City. Privately printed.
1934 Fascinating Discovery of an Ancient Buried City. Second edition. Privately printed.

Lewis, Thomas M.N., and Madeline D. Kneberg
1939 *Manual of Field and Laboratory Techniques Employed by the Division of Anthropology, University of Tennessee*. University of Tennessee, Knoxville.
1946 *Hiwassee Island: An Account of Four Tennessee Indian Peoples*. University of Tennessee Press, Knoxville.
1947 *The Archaic Horizon in Western Tennessee*. Tennessee Anthropology Papers No. 2. University of Tennessee, Knoxville.
1958 *Tribes That Slumber: Indians of the Tennessee Region*. University of Tennessee Press, Knoxville.
1959 The Archaic Culture in the Middle South. *American Antiquity* 25:161-183.

Lewis, Thomas M.N., Madeline D. Kneberg, and Lynne P. Sullivan (compiler and editor)
1995 *The Prehistory of the Chickamauga Basin in Tennessee*. 2 vols. University of Tennessee Press, Knoxville.

Lewis, Thomas M.N., and Madeline D. Lewis
1961 *Eva: An Archaic Site*. University of Tennessee Press, Knoxville.

Linton, Ralph
1923 Proceedings of the Central Section of the American Anthropological Association. *American Anthropologist* 23(2)284-286.

Lurie, Nancy Oestrich
1983 *A Special Style: The Milwaukee Public Museum, 1882-1982*. Milwaukee Public

Museum, Milwaukee.

Lyman, R. Lee, and Michael J. O'Brien
2003 *W. C. McKern and the Midwestern Taxonomic Method*. University of Alabama Press, Tuscaloosa.

Lyon, Edwin H.
1996 *A New Deal for Southeastern Archaeology*. University of Alabama Press, Tuscaloosa.

Mainfort, Robert C., Jr.
2008 *Sam Dellinger, Raiders of the Lost Arkansas*. University of Arkansas Press, Fayetteville.

McKern, W.C.
1927 Archeological Field Methods in Wisconsin. *The Wisconsin Archeologist* 6(1):48-53.
1928 Archaeological Field Work in Sheboygan and Dodge Counties. *Year Book of the Public Museum of the City of Milwaukee for 1927*, Vol. 7:10-30.
1930 The Kletzien and Nitschke Mound Groups. *Bulletin of the Public Museum of the City of Milwaukee* 3:417-572.
1931 A Wisconsin Variant of the Hopewell Culture. *Bulletin of the Public Museum of the City of Milwaukee* 10:111-113.
1932 Notes on the Museum's Collecting Expeditions in 1930: New Excavations in Wisconsin Hopewell Mounds. *Year Book of the Public Museum of the City of Milwaukee for 1930*, Vol. 10:9-27.
1933a Letter to T.M.N. Lewis, April 28, 1933, Anthropology Correspondence, Milwaukee Public Museum, Milwaukee.
1933b Letter to T.M.N. Lewis, May 23, 1933, Anthropology Correspondence, Milwaukee Public Museum Archives, Milwaukee.
1933c Letter to T.M.N. Lewis, December 4, 1933, Anthropology Correspondence, Milwaukee Public Museum Archives, Milwaukee.
1933d Letter to T.M.N. Lewis, December 29, 1933, Anthropology Correspondence, Milwaukee Public Museum Archives, Milwaukee.
1934 Certain Culture Classification Problems in Middle Western Archaeology. *National Research Council, Committee on State Archaeological Surveys, Circular No. 17*, Washington, D.C.
1935 Review of a Folsom Complex by Frank H. H. Roberts, Jr. *American Antiquity* 1(2):170-171.
1937 Letter to Professor T.M.N. Lewis, July 14, 1937, Anthropology Correspondence Files, Milwaukee Public Museum, Milwaukee.
1939 The Midwestern Taxonomic Method as an Aid to Archaeological Study. *American Antiquity* 4:301-313.
1942 The First Settlers of Wisconsin. *Wisconsin Magazine of History* 26(2):153-169.
1947 Review of: Hiwassee Island, Thomas M.N. Lewis and Madeline Kneberg. *American Anthropologist* 49(1):91-95.

Milwaukee Journal
1930 Mysterious Cave of the Song of Death. *The Sunday Magazine of the Milwaukee Journal*, November 23, 1930, p. 7.

Milwaukee Public Museum
n.d. Accession Files. Milwaukee Public Museum, Milwaukee.

Moore, Michael C., David H. Dye, and Kevin E. Smith
2015 WPA Excavations at the Mound Bottom and Pack Sites in Middle Tennessee, 1936-1937. In *New Deal Archaeology in Tennessee*, edited by David H. Dye. University of Alabama Press, Tuscaloosa (in press).

Morse, Dan F., and Phyllis A. Morse (editors)
1998 *The Lower Mississippi Valley Expeditions of Clarence Bloomfield Moore*. University of Alabama Press, Tuscaloosa.

National Archives and Records Administration
n.d. Military Records for Thomas McDowell Nelson Lewis. National Personnel Records Center, St. Louis.

National Research Council
1930 *Guide Leaflet for Amateur Archaeologists*. Reprint and Circular Series of the National Research Council, No. 93, Washington, D.C.
1938 *International Directory of Anthropologists*. National Research Council, Washington, D.C.
1940 *International Directory of Anthropologists* (2nd edition). National Research Council, Washington, D.C.

Northwestern College
1910 *Catalogue of Northwestern College at Watertown, Wisconsin for the Year 1909-*

1910. Northwestern Publishing House, Printer, Milwaukee, Wisconsin.
1911 *Catalogue of Northwestern College at Watertown, Wisconsin for the Year 1910-1911*. Northwestern Publishing House, Printer, Milwaukee, Wisconsin.
1912 *Catalogue of Northwestern College at Watertown, Wisconsin for the Year 1911-1912*. Northwestern Publishing House, Printer, Milwaukee, Wisconsin.
1913 *Catalogue of Northwestern College at Watertown, Wisconsin for the Year 1912-1913*. Northwestern Publishing House, Printer, Milwaukee, Wisconsin.
1914 *Catalogue of Northwestern College at Watertown, Wisconsin for the Year 1913-1914*. Northwestern Publishing House, Printer, Milwaukee, Wisconsin.

Nye, Mary Jo
2009 Scientific Biography: History of Science by Another Means? *Isis* 97:322-329.

O'Brien, Michael J., and R. Lee Lyman
2001 The National Research Council and Midwestern Archaeology: The St. Louis Meeting of 1929. *Missouri Archaeologist* 62:107-148.

Oertel, Everett
1976 Early Records of Honey Bees in the Eastern United States. *American Bee Journal* 116(6):260-261, 290.

Ott, John Henry
1917 *Jefferson County, Wisconsin and Its People*. Volume II. The S.J. Clarke Publishing Company, Chicago.

Penkiunas, Daina, and Timothy F. Heggland
2001 *South Washington Street Historic District*. National Register of Historic Places Registration Form, United States Department of Interior, National Park Service.

Pensacola Times
1930 Former News Man Turns Up. *The Pensacola Times*, June 12, 1930, p. 1.

Phipps, Linda S.
2002 Mowersville Road Bridge, HAER No. PA-590. http://www.historicbridges.org/pennsylvania/mowersville/data.pdf, accessed July 18, 2013.

Pond, Alonzo W.
1930 *Primitive Methods of Working Stone, Based on Experiments of Halvor L. Skavlem*. Logan Museum Bulletin No. 2, Beloit.

Public Opinion
1919 T.M. Nelson Dies, of Heart Trouble; Active Citizen. *Public Opinion*, Chambersburg, Pennsylvania, March 20, 1919, pp. 1, 2.

Quaife, Milo
1924 *Wisconsin, Its History and Its People*. The S.J. Clarke Publishing Company, Chicago.

Rodell, Roland, and William Green
2004 McKern Breaks Ground in Wisconsin: Contributions to Method and Chronology in Midwest Archaeology. *The Wisconsin Archeologist* 85(2):24-43.

Ross, John T.
1931 Paducahan Owns Valuable Indian Relics. *Kentucky Progress Magazine* 4(1):22, 44, 45.

Schwartz, Douglas K.
1967 *Conceptions of Kentucky Prehistory: A Case Study in the History of Archaeology*. University of Kentucky Press, Lexington.
2015 William S. Webb and the Paradoxical Leadership of TVA Archaeology. In *New Deal Archaeology in Tennessee*, edited by David H. Dye. University of Alabama Press, Tuscaloosa (in press).

Seilhamer, G.A. and G.O. Seilhamer
1905 *Biographical Annals of Franklin County, Pennsylvania, Containing Genealogical Records of Representative Families*. Genealogical Publishing Company, Chicago, Illinois.

Smith, H.H.
1932 Letter to Charles E. Brown, October 1932, Wisconsin Archeological Society Papers, Wisconsin Historical Society Archives, Madison.

Smith, Kevin E.
2015 The Tennessee Archaeological Society (1944-1985): Legacy and Consequences of the New Deal in Tennessee. In *New Deal Archaeology in Tennessee*, edited by David H. Dye. University of Alabama Press, Tuscaloosa (in press).

Stoltman, James B.
2006 History of Archaeological Research. In *Handbook of North American Indians, Volume 14: Southeast*, edited by Raymond D. Fogelson, pp. 14-30. Smithsonian Institution Press, Washington, D.C.

Stocking, George W., Jr.
1980 *Anthropology at Chicago: Tradition, Discipline, Department*. Joseph Regenstein Library, University of Chicago.

Sullivan, Lynne P.
1994 Madeline Kneberg Lewis: An Original Southeastern Archaeologist. In *Women in Archaeology*, edited by Cheryl Claassen, pp. 110-119. University of Pennsylvania Press, Philadelphia.
1999 Madeline D. Kneberg Lewis, Leading Lady of Tennessee Archaeology. In *Grit Tempered: Early Women Archaeologists in the Southeastern United States*, edited by Nancy M. White, Lynne P. Sullivan, and Rochelle A. Marrinan, pp. 57-91. University Press of Florida, Gainesville.

Swanton, John R.
1922 *Early History of the Creek Indians and Their Neighbors*. Bulletin 73. Bureau of American Ethnology, Smithsonian Institution. Government Printing Office, Washington D.C.

Terrell, Mary
2009 Biography as Cultural History of Science. *Isis* 97:306-313.

Time
1933 Buried News. *Time* 21(4):45.

Tindal, Brenda
2011 Letter to Marlin F. Hawley, Seeley G. Mudd Manuscript Library, Princeton University, Princeton, New Jersey, December 9, 2011. Copy in possession of authors.

Tuscaloosa News
1931 Museum Party Returns after Arkansas Trip; University Group Excavates at Walnut Mounds. *The Tuscaloosa News*, September 10, 1931, p. 3. Tuscaloosa, Alabama.

United States Department of State
1923 Passport Application: Thomas McDowell Nelson Lewis, May 9, 1923. http://interactive.ancestrylibrary.com: U.S. Passport Applications, 1795-1925, accessed March 13, 2014.

United States Patent Office
1913 *Official Gazette of the United States Patent Office*. Government Printing Office, Washington, D.C.
1921 *Official Gazette of the United States Patent Office*. Government Printing Office, Washington, D.C.

University of Wisconsin
1920 The University of Wisconsin Catalogue, 1919-20. *Bulletin of the University of Wisconsin*, General Series 841, Madison.

Wales, Thomas B. (compiler)
1889 In-Friesian Herd-Book Containing a Record of All Holstein-Friesian Cattle. *Holstein-Friesian Association of America, Volume IV-Bulls*. Egbert, Fidlar & Chambers, Printers and Binders, Davenport, Iowa.

Watertown Daily Times
1930 Interesting Facts about Watertown People. *The Watertown Daily Times*, July 2, 1930, p. 8.
1938 Geo. C. Lewis Stricken with Heart Attack. *The Watertown Daily Times*, December 13, 1938, p. 1.
1959 Mrs. Lewis, Formerly of City, Dies. *The Watertown Daily Times*, March 27, 1959, p. 1, 4.

Watertown Gazette
1923 Personals. *The Watertown Gazette*, Watertown, Wisconsin, November 8, 1923, p. 4.
1924a Employed to Manage G. B. Lewis Company. *The Watertown Gazette*, Watertown, Wisconsin, May 29, 1924, p. 1.
1924b Lewis-Anderson Wedding. *The Watertown Gazette*, Watertown, Wisconsin, June 12, 1924, p. 1.

Watertown Historical Society
2013a G.B. Lewis Company. http://www.watertownhistory.org/Articles/Lewis_GB.htm, accessed July 25, 2013.
2013b Watertown's Octagon House.

http://www.watertownhistory.org/Articles/Octagon_House_MainPage.htm, accessed August 15, 2013.

Webb, William S.
1932 Letter to J.T.B. Gillenwater, Horse Cave, Kentucky, July 6, 1932, William S. Webb Papers, University of Kentucky Archives, Lexington.
1933 Letter to Barbara T. Anderson, February 13, 1933, W.S. Webb Papers, University of Kentucky Archives, Lexington.

Wesler, Kit W.
2001 *Excavations at Wickliffe Mounds*. University of Alabama Press, Tuscaloosa.
2012 A Century at Wickliffe Mounds: Evolving Goals, Methods and Prospects. Paper presented at the 77th Annual Meeting of the Society for American Archaeology, Memphis.

Wilder, J.J.
1920 Our Advertisers. *Dixie Beekeeper* 2(1):4-5.
1921 Editorial. *Dixie Beekeeper* 2(11):2-4.

Willey, Gordon R.
1949 *Archeology of the Florida Gulf Coast*. Smithsonian Miscellaneous Collections 113, Smithsonian Institution, Washington, D.C.

Willey, Gordon R., and Jeremy A. Sabloff
1993 *A History of American Archaeology*. Third edition. Thames and Hudson, London.

Wittry, Warren L.
1959 Introduction: Archaeological Studies of Four Wisconsin Rockshelters. *The Wisconsin Archeologist* 40(4):146-150.

Wolff, Eldon G.
1939 Pottery Restoration at the Milwaukee Public Museum. *The Notebook*, June 1939, pp. 53-61.

Zerubavel, Eviatar
1993 Horizons: On the Sociomental Foundations of Relevance. *Social Research* 60(2): 397-413.

Marlin F. Hawley
Adjunct Research Associate
Illinois State Museum
Springfield, Illinois
mfhawley@wisc.edu

David H. Dye
Department of Earth Sciences
University of Memphis
Memphis, Tennessee
daviddye@memphis.edu

QUALLS CAVE (40RB2): A MULTI-COMPONENT SITE OVERLOOKING THE RED RIVER, ROBERTSON COUNTY, TENNESSEE

John T. Dowd

Explorations of the Qualls Cave site (40RB2) were conducted from late fall 1969 through late summer 1970 by members of the Tennessee Archaeological Society. Stone, ceramic, shell, bone, and other artifacts indicative of Archaic through Mississippian occupations were recovered over the course of the investigations. The excavations also exposed over twenty burials, including a jumbled mass of seven individuals in a front chamber. Fourteen pits holding 12 flexed bodies and 2 cremations were discovered in a rear chamber. Many of the rear chamber burials contained associated burial objects made of shell, including a sandal sole gorget from Burial 11. Sandal sole gorgets are associated with the Glacial Kame mortuary complex, a terminal Archaic to early Woodland complex generally defined for northwestern Ohio through southern Ontario. The specimen from Qualls Cave represents the southern-most example discovered to date. In addition, a King Helmet Conch shell with bone fragments was recovered from a pit initially defined as Burial 19. Recent analysis determined the pit was not a burial as the bone fragments were identified as mostly turtle rather than human.

In 1969 there was no state Division of Archaeology or other governing agency concerning archaeology in Tennessee. There was Memphis State University (now University of Memphis) in West Tennessee, and the University of Tennessee-Knoxville in East Tennessee. These two institutions cared for matters concerning archaeology in their respective areas of the state, but Middle Tennessee was considered “wide open” at that time. The Southeastern Indian Antiquities Survey (SIAS) was established in 1963 to handle archaeological issues in Middle Tennessee (Dowd and Smith 2008). In 1976, this organization changed the chartered name to the Middle Cumberland Archaeological Society (MCAS).

My friend Buddy Brehm and I were members of the SIAS (Buddy was a founder of the SIAS and its most active member). We were also members of the Tennessee Archaeological Society (TAS). In 1969 we had rejuvenated the TAS chapter in Rutherford County centered in Murfreesboro, and also helped start a new chapter in Robertson County centered in Springfield. The good thing about starting a new TAS chapter was getting local people interested in their past history. The bad thing was that some people wanted to start digging right away. This urge was usually quelled after a few days out in the field, but some people would want to continue.

Such was the case at the new TAS Robertson County chapter. Two young men from the Adams area (Jimmy and Paul Eden) really became obsessed with going out to dig.[1] One day the Eden boys were floating the Red River on a fishing trip and discovered a cave. The cave was not accessible from the river so they went back a few days later and entered the cave from above. They picked up a few pieces of bone and several projectile points laying on the surface, and figured this would be a good cave to dig. They contacted Buddy and told him of their find and intention to dig the cave. Buddy accompanied Jimmy Eden to a 20 Sep 1969 meeting with the landowner (Mr.

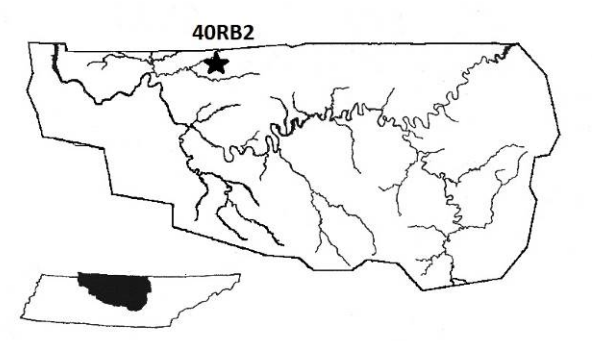


FIGURE 1. Location of 40RB2.

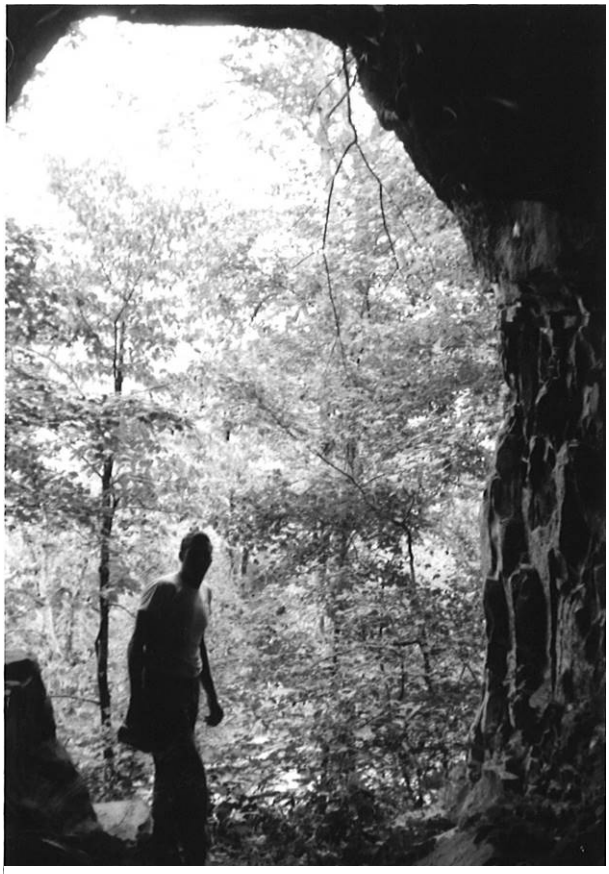


FIGURE 2. One of the Eden boys at Qualls Cave entrance, October 1969.

Arch Qualls) where permission was given to the Eden boys to dig the cave on the condition they did not leave deep holes where someone could get hurt.

The Eden's visited the cave the following weekend and dug a couple of random holes. The first hole yielded projectile points, animal bones, and pottery sherds. A second hole, located in a small recess on the right side of the cave, contained a mass of what they believed to be human bones. The Eden's respected Buddy's experience and wisdom, and contacted him since they thought they had discovered something important. That is when Buddy and I became involved with the Qualls Cave exploration.

The next weekend Buddy and I met with the Eden's to visit the cave. We examined their finds and determined the bones they had found were indeed human. The Eden boys were determined to dig the cave, but were more or less looking to Buddy and myself for guidance. This was not an unusual circumstance at the time as we often worked alongside folks only interested in relic collecting to obtain as much archaeological information as possible that would otherwise be lost.[2] After talking it over, we all agreed the artifacts would go to the Eden boys but they had to conform to our instructions how the excavation was to proceed.[3] The following presents the records and data that Buddy and I obtained during the Eden's exploration of Qualls Cave between late fall 1969 and late summer 1970.[4]

Qualls Cave Description

Qualls Cave received its name from the landowner, Mr. Arch Qualls. The original assigned site number, SIAS #58, was later changed to the current state site number 40RB2. The cave occurs on a high (approximately 200 ft.) limestone bluff overlooking the south side of the Red River, about one-half mile south of its junction with Buzzard Creek (Figures 1-2). The cave itself is about 80 feet above the river, and can only be accessed through a steep descent from above to a natural

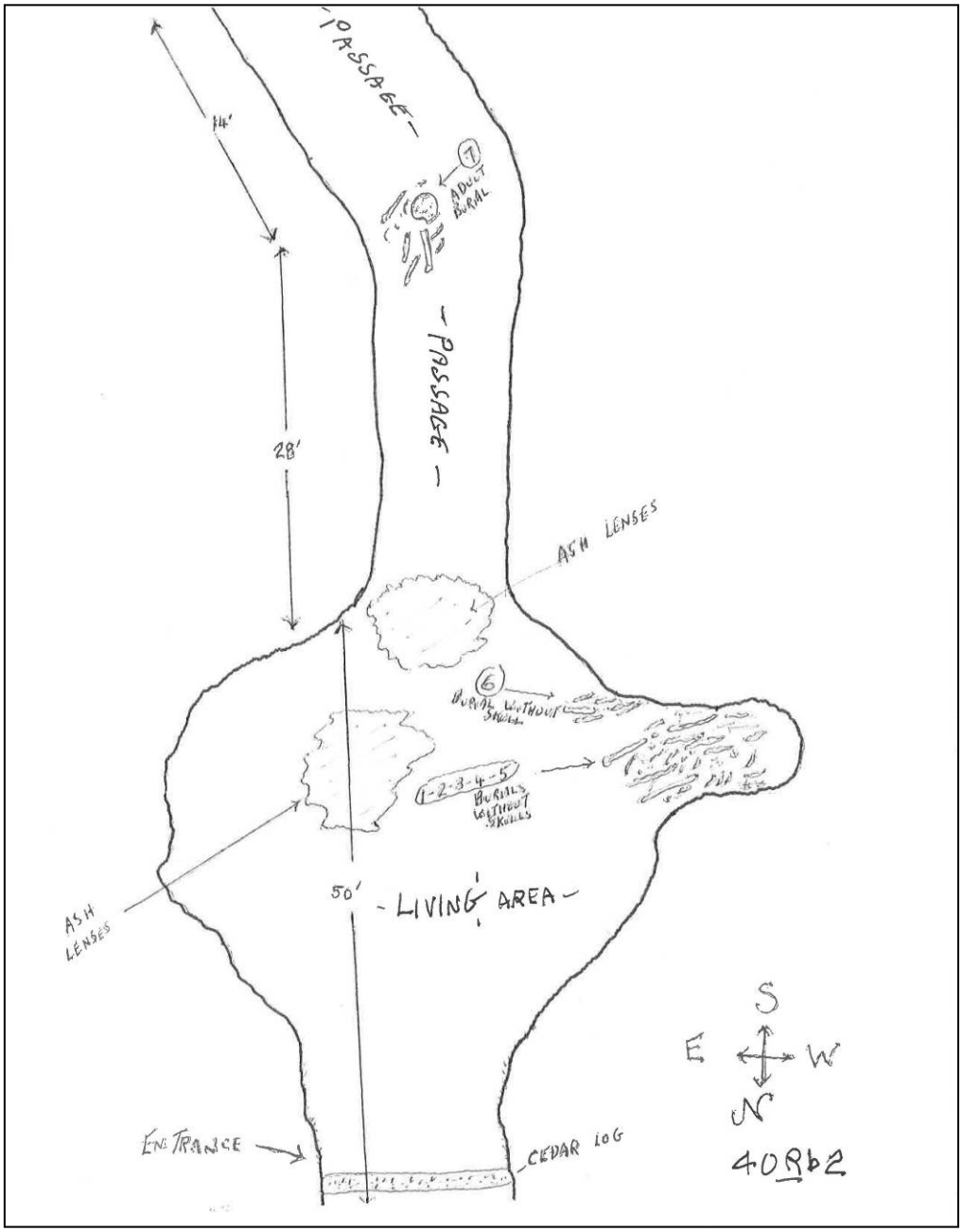


FIGURE 3. Sketch of cave entrance, front chamber, and passage.

ledge in front of the cave. No stream was observed running through the cave, but the interior was very humid.[5] The high humidity caused water drops to form on the cave roof. Over time, the water dropped onto the cave floor creating a hard crust to form over the first three to four inches. However, the soil under this crusty layer was very loose. The interior cave temperature stayed a steady 56 to 58 degrees F.

The cave exhibited at least three different sections. At the cave entrance was an area about six feet wide, 40-50 feet long, and five feet high (Figures 3-4). This segment joined a narrower passage also about 40-50 ft. long (Figure 5). After a couple of turns, this segment opened into a rear chamber measuring about 12 ft. wide by 16 ft. long (Figure 6).

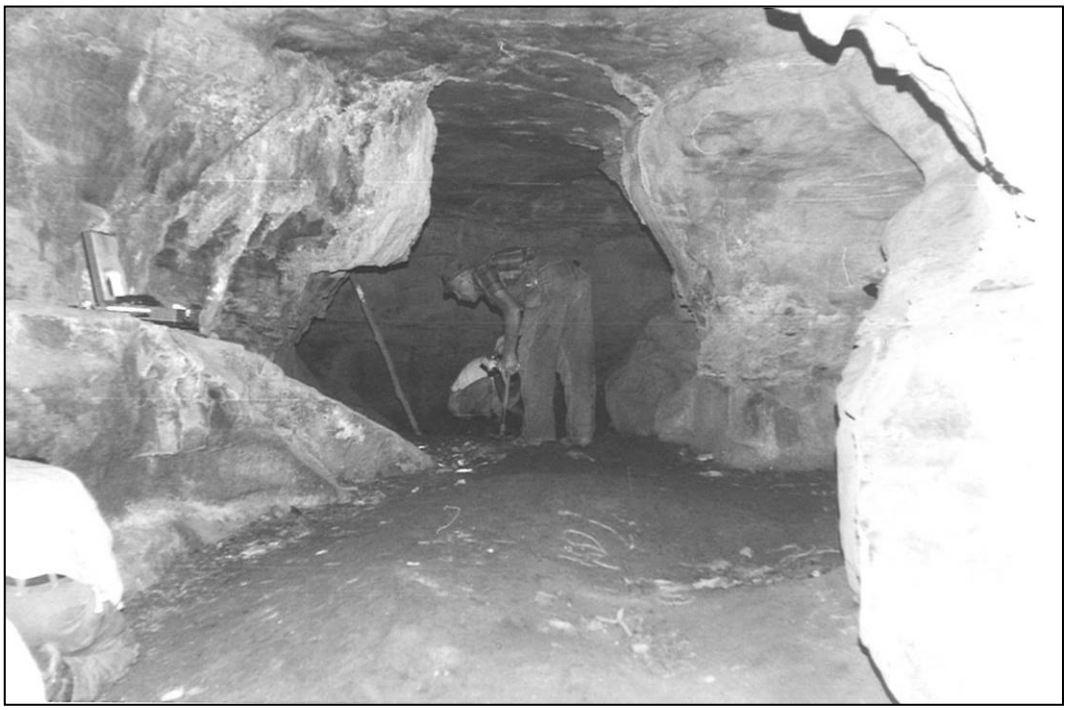


FIGURE 4. View from cave entrance of Mr. Eden (owner of the Bell Witch Cave) in front chamber, October 1969. The recess to right of Mr. Eden contained a jumbled mass of human bone.

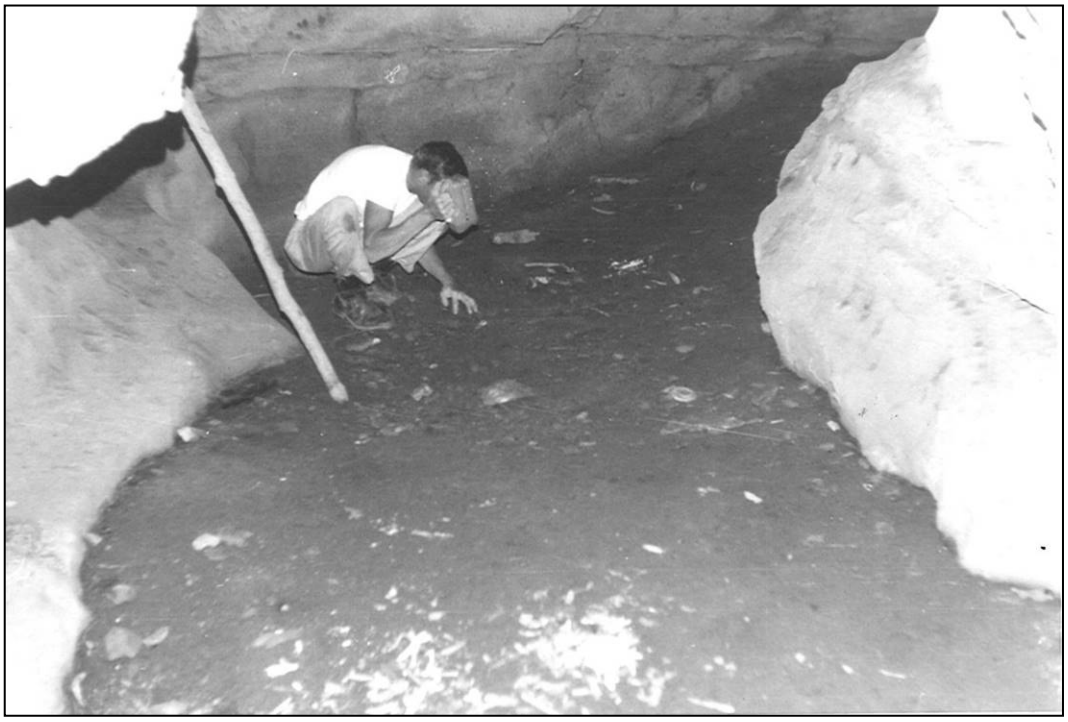


FIGURE 5. One of the Eden boys in cave passage leading to rear chamber, October 1969.

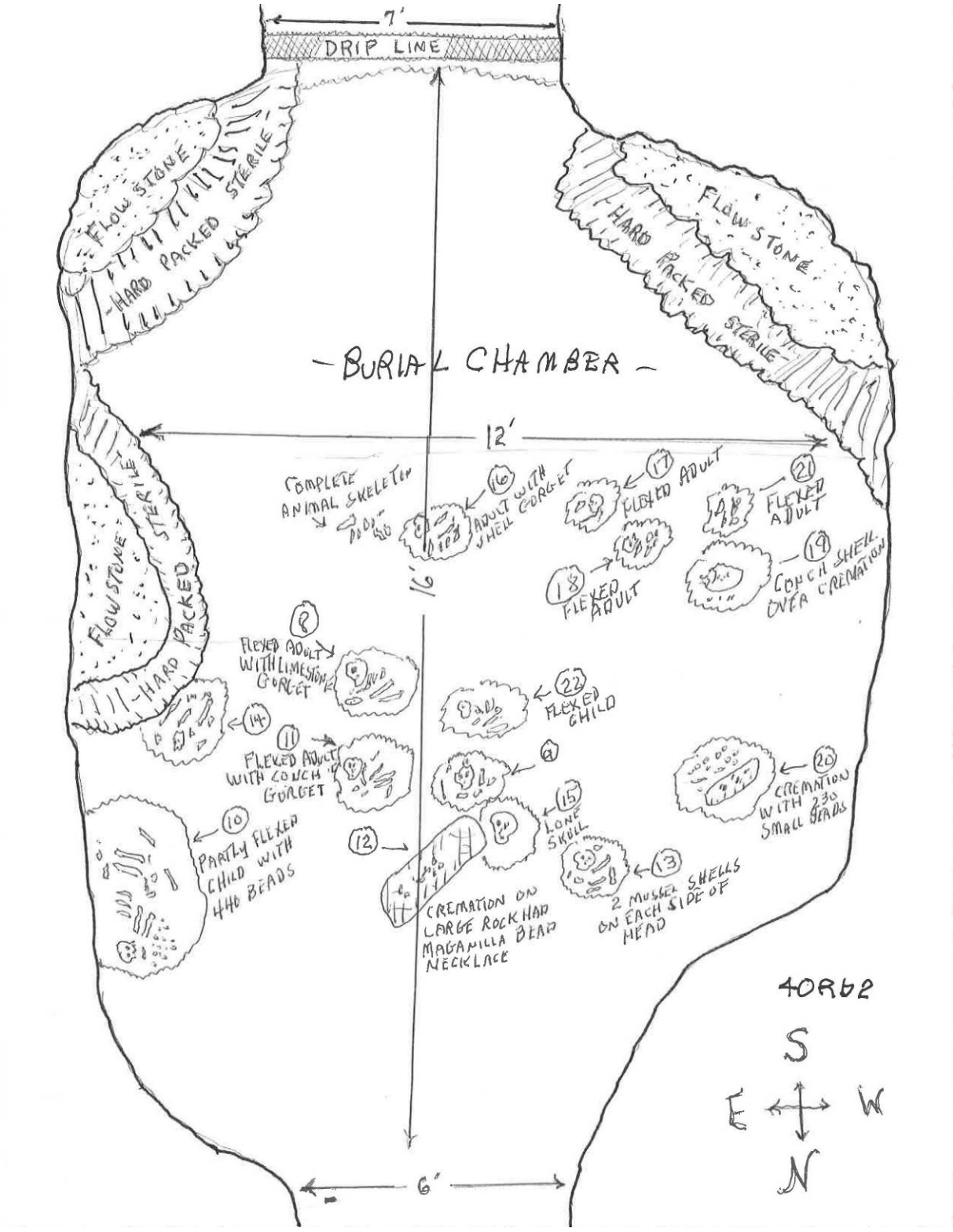


FIGURE 6. Sketch of rear chamber.

Qualls Cave Excavation

Front Chamber and Passage

As previously mentioned, the Eden boys had discovered human bones in one of their initial holes in the front chamber. Buddy and I began our excavation at this location to assess what was going on. Our efforts determined the area contained a jumbled mass of postcranial skeletal elements (see Figures 3-4). The individuals appeared to have been carelessly buried in a pile (although not in an extended position), as very few articulated limbs were observed. No skulls were present, but a count of the femurs suggested five adults (initially noted as Burials 1-5). These remains were sent to the Department of Anthropology at the University of Tennessee for analysis. An examination identified seven individuals in the mass of bone rather than five (Eddy 1976).[6]

A plan was then created where the Eden boys would begin digging at the cave entrance and work their way back, backfilling as they went along. While the Eden's started work on the apron of the cave entrance, Buddy and I put in a 2 x 2 ft. test unit about six feet into the cave where the entrance narrowed from eight feet wide to about six feet. To our surprise, just under the surface we discovered a cedar log that lay across the narrowest part of the cave entrance (see Figure 3). The log measured four feet long and 10 inches in diameter, and showed no signs of exposure to fire. Since this location represents the narrowest part of the (north-facing) cave entrance, we thought the log might have been brought in as a threshold to put up animal hides for protection against the cold winter wind. We left the log in place, and moved the excavation unit several inches past the log to continue working. The test pit was dug in six to eight-inch levels. Four levels were removed, with the fourth level ending in sterile red clay.

The initial chamber beyond the cave entrance (deemed the living area) was completely dug and sifted through 1/4-inch wire mesh. A number of fire pits were observed during the excavation. Two large ash lenses were also observed near the surface, but it is possible these were modern in origin. An additional burial (Burial 6) was found about a foot from the previously excavated bone mass (see Figure 3). This burial was also missing the skull.

The cave beyond the initial chamber narrowed into a passage about 45 feet long (see Figures 3 and 5). A partial human burial (Burial 7) was discovered about midway through the passage roughly 80 feet from the cave entrance. The elements had been scattered, most likely by an animal. As with the initial chamber, all of the passage soil was dug and screened through 1/4-inch wire mesh. A pestle found with the remains may or may not have been an associated burial object.

Rear Burial Chamber

The end of the passage opened into another chamber measuring roughly 12 feet wide and 16 feet long (see Figure 6). Visible within this chamber were the vague outlines of 14 human burials (designated Burials 8-18, 20-22) within pits, as well as another pit holding a small animal skeleton. The skeletal elements were poorly preserved (little more than mush) due to the very damp cave conditions and could not be removed (Figure 7). Two burials (Burials 12 and 20) were determined to be cremations.

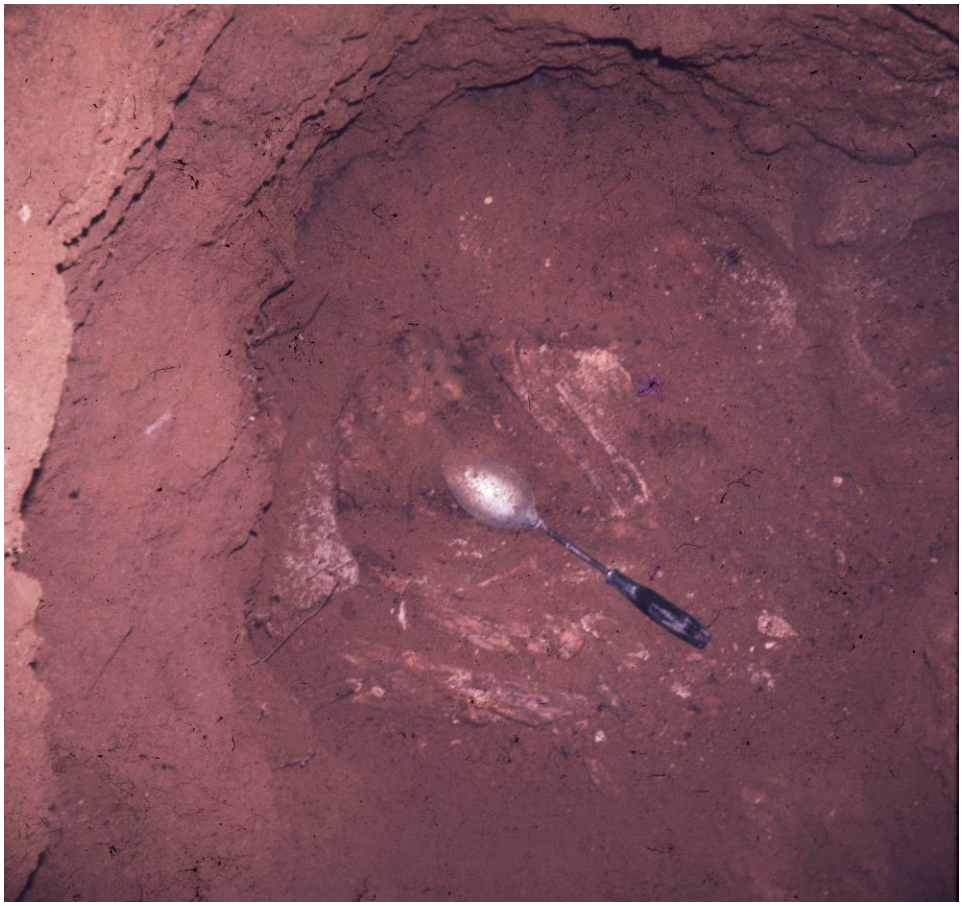


FIGURE 7. Example of flexed burial from rear chamber (burial number unknown).

FIGURE 8. Sandal sole-style shell gorget in Burial 11; Exterior (left), Interior (right). Scale in inches.

TABLE 1. Summary of Human Burials Recovered from Qualls Cave, 40RB2.

Burial No.	Burial Position	Age	Bone Condition	Associated Artifacts	Comments
1-5	?	6 adults, 1 child	Very good	-	Large mass of jumbled post-cranial remains found in chamber near entrance; initial identification of five individuals based on observed femurs; seven individuals identified by UT analysis.*
6	Extended	Adult	Fair	Pestle	Post-cranial remains found two feet southeast of Burials 1-5, less than 50% complete.
7	?	?	Poor	Pestle?	Scatter of partial remains in passage, includes cranial fragments, long bones, and phalanges.
8	Flexed	Adult	Poor	Limestone gorget	Pit burial in rear chamber, 4 feet from surface.
9	Flexed	Adult	Poor	-	Pit burial in rear chamber, 4 feet from surface.
10	Flexed	Child	Poor	Marine shell beads, 22 large round and 440 small disc	Pit burial in rear chamber, 6 to 12 inches from surface on small ledge along east wall.
11	Flexed	Adult	Poor	Sandal sole-style shell gorget	Pit burial in rear chamber, 4 feet from surface; remains found under large flat stone. Five "X" incisions on gorget interior.
12	-	?	Poor	~70 shell beads	Cremation from pit in rear chamber, remains had been placed on large stone.
13	Flexed	Adult	Poor	Mussel shells	Pit burial in rear chamber.
14	?	?	Poor	-	Pit burial in rear chamber near east wall; small amount of very disturbed remains.
15	?	Adult	Poor	-	Pit burial in rear chamber; partial skull and three phalanges recovered.
16	Flexed	Adult	Poor	Small shell gorget	Pit burial in rear chamber; 30 inches from surface, few remains present.
17	Flexed?	Adult	Poor	Mussel shell?	Pit burial in rear chamber, 4 feet from surface; very close to Burial 18.
18	Flexed?	Adult	Poor	Mussel shell?	Pit burial in rear chamber, 4 feet from surface; very close to Burial 17.
19	Not a burial			King Helmet conch; mammal, turtle, and terrapine frags placed with the conch shell	Initially recorded as Burial 19 in rear chamber; a modified King Helmet conch shell with small bone fragments was placed into prepared pit. The bone fragments were thought to be human but recent analysis determined the fragments were animal.
20	-	?	Fair	230 disc shell beads	Cremation from pit in rear chamber; remains had been covered with a flat stone.
21	Flexed?	Adult	Poor	-	Pit burial in rear chamber, 4 feet from surface; outlines of just three long bones visible.
22	Flexed?	Child	Poor	-	Pit burial in rear chamber; teeth in place but no other bone visible.

* = Eddy 1976.

Table 1 contains a summary of the human burials identified during the Qualls Cave work. Of the 14 burials noted in the rear chamber, 12 comprised flexed (or probable flexed) individuals placed in pits (see Figure 6). Another two pits held cremated remains. Many of the burials contained shell objects, including a sandal sole gorget in Burial 11 (Figure 8) and a small shell gorget in Burial 16 (Figure 9). Additional associated burial objects with the rear chamber graves include a limestone gorget from Burial 8, as well as beads from Burials 10, 12, and 20 (Figure 10). The manner of interment and types of associated burial objects (notable absence of ceramics) suggests these burials date to the Archaic period.

A modified King Helmet Conch shell that had been placed over bone fragments was recovered from a pit in the rear chamber (Figures 11-12).[7] This discovery was initially thought to be a cremation and designated Burial 19. However, a recent analysis of the bone fragments determined they were actually pieces of unidentified mammals, turtles, and terrapins placed with or inside the conch shell (Table 2). There was no other evidence of human remains in the pit, so this feature is no longer considered to be a human burial.

FIGURE 9. Small shell gorget recovered from Burial 16 (scale in inches, each mark 1/16”).

FIGURE 10. Beads from Burial 10. Scale in inches.

FIGURE 11. Modified King Helmet Conch shell from pit initially recorded as Burial 19; Exterior (left), Interior (right). Scale in inches.

FIGURE 12. Drilled holes along seam of modified King Helmet Conch shell; Exterior (left), Interior (right). Scale in inches.

TABLE 2. Faunal Species with King Helmet Conch Shell, Initially Defined as Burial 19.

Taxon	**Common Name**	**Count**	**MNI**
Mammalia, large	large mammal	3	1
Testudines	turtle	2	0
Apalone sp.	soft-shelled turtle	3	1
Emydidae	family of water/box turtles	3	1
Terrapene carolina	eastern box turtle	8	1
Trachemys scripta cf. *troostii*	Cumberland slider	13	1

TABLE 3. Ceramic Artifacts Collected by Dowd from Qualls Cave Explorations.

Provenience	Miss Plain	Bell Plain	Kimms FbrImp	Shell Cord	Shell ChkSt	Grit Plain	Grit Cord	Lime Plain	Lime Cord	Unident ShellTmp
General	243	29	11	2	23	25	1	3	12	1
Front Chamber										
#1	-	1	-	-	-	-	-	-	-	-
#2	-	-	1	-	-	-	-	-	-	-
#21	1	-	-	-	-	-	-	-	-	-
#39	-	-	-	1	-	-	-	-	-	-
TOTAL	244	30	12	3	23	25	1	3	12	1

FIGURE 13. Mississippi Plain jar rim sherds with strap handles collected by Dowd. Scale in cm.

Qualls Cave Non-Mortuary Artifacts

General explorations throughout the cave yielded a variety of ceramic, lithic, faunal, and other specimens from non-mortuary contexts.[8] These items attest to a wide range of occupations from Archaic through Mississippian within the cave.

Ceramics

A total of 354 ceramic sherds were removed from the front chamber area (Table 3).[9] Most (*n*=313, 88.4%) of the ceramic assemblage is comprised of Mississippian wares that include the ubiquitous Mississippi Plain (*n*=244, 78%) along with Bell Plain (*n*=30, 9.8%) and Kimmswick Fabric-Impressed (*n*=12, 3.8%). Mississippi Plain vessel forms were primarily jars with a few bowls also present. Several of the Mississippi Plain jar rims had strap (Figure 13), lug, or bifurcate lug handles. The Bell Plain specimens comprised fragments of jars and bowls. One jar rim with shell temper was not assigned as either Mississippi Plain or Bell Plain, as it exhibited an everted rim with two possible trailed lines along the body (Figure 14). The fabric weaves observed on the Kimmswick Fabric-Impressed pan exteriors ranged from fine to coarse (Figure 15). A modest number of shell-tempered check-stamped (*n*=23, 6.5%) and shell-tempered cordmarked (*n*=3, 1%) specimens were also recovered (Figures 16-17).

The remainder of the ceramic assemblage (*n*=41, 11.6%) was composed of Woodland wares (see Table 3). Plain sherds tempered with grit were the most numerous (*n*=25), followed by cordmarked sherds tempered with crushed limestone (*n*=12; Figure 18). A small number of plain sherds tempered with crushed limestone (*n*=3), and one cordmarked sherd with grit temper, round out this sample.

FIGURE 14. Unidentified shell-temper rim sherd with everted rim and possible trailed lines collected by Dowd. Scale in cm.

FIGURE 15. Examples of Kimmswick Fabric-Impressed pan rim sherds collected by Dowd. Scale in cm.

FIGURE 16. Examples of shell-temper check stamped jar rims collected by Dowd. Scale in cm.

FIGURE 17. Example of shell-temper cordmarked body sherd collected by Dowd. Scale in cm.

FIGURE 18. Example of limestone-temper cordmarked body sherd collected by Dowd. Scale in cm.

Lithics

Lithic artifacts recovered from the investigations included numerous projectile points along with bifaces, gorget fragments, an end scraper, and a worked cube of hematite (Figures 19-22). These artifacts date from the Archaic through Mississippian periods. The author was able to photograph a selection of items kept by the Eden brothers (see Figures 19 and 21). Other specimens were collected and have been tabulated in Table 4 (see Figures 20 and 22).

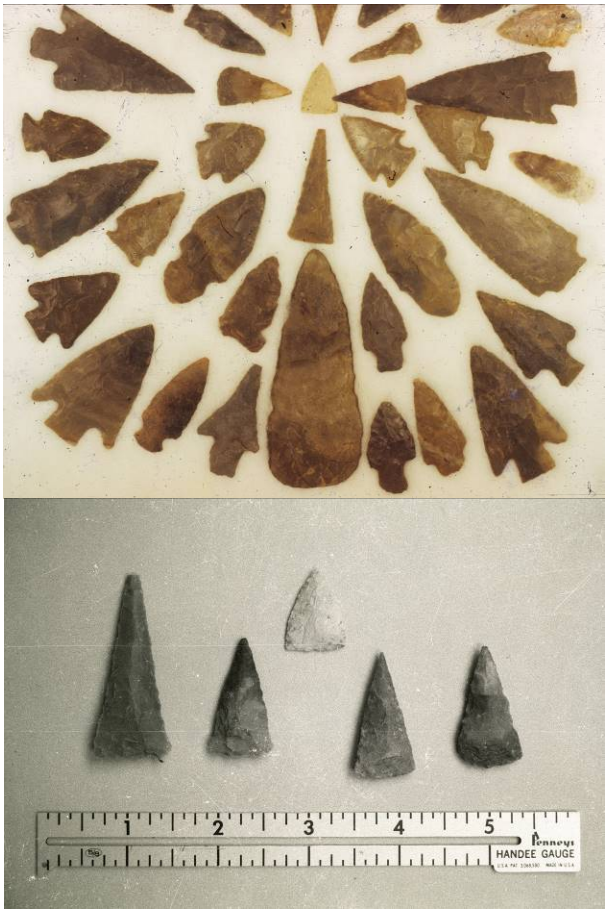


FIGURE 19. Sample of projectile points removed from Qualls Cave. Bottom scale in inches.

Figure 20. Sample of projectile points collected by Dowd. Scale in cm.

Figure 21. Sample of gorget fragments from the excavations. Scale in inches.

Figure 22. Worked cube of hematite collected by Dowd. Scale in cm.

TABLE 4. Lithic Artifacts Collected by Dowd from Qualls Cave Explorations.

Provenience	Artifact	Comments
General		
No number	Cotaco Creek point	Chert
No number	Turkey-tail point	Chert
Front Chamber		
#5	Large biface	Chert; thin biface with polish along lateral edges
#8	Motley point	Chert; somewhat large
#9	Ovate blade	Chert
#11	Madison point	Chert
#19	Thick biface	Chert; cortex still present on one end
#20	Secondary flake	Chert; bifacial nibbling on lateral edge, cutting tool(?)
#23	Thin biface	Chert
#25	Thin biface	Chert; distal section of large blade
#27	Core	Chert; initially worked as biface, then used as core
#28	Stemmed point	Chert; stem missing
#34	Gorget	Ground shale; thin fragment with two drilled holes
#36	Lowe Cluster point	Chert
#36	Mud Creek point	Chert
#37	Wade-like point	Chert
#38	Drilled pebble	Weathered chert(?); small pebble drilled on one end
#41	End scraper	Chert; corner-notch point reworked into end scraper
#42	Turkey-tail point	Chert, distal end missing
#44	Motley(?) point	Chert; heavily reworked point
#45	Worked hematite	Hematite; small cube with carved center and grooved lateral edges
Burial Chamber		
#10	Pickwick point	Chert

TABLE 5. Additional Faunal Specimens Collected by Dowd from Qualls Cave Explorations.

Provenience	**Taxon**	**Common Name**	**Count**	**MNI**
#17, front	Mammalia, large	large mammals	3	1
#18, front	Cervidae	family of deer and elk	4	1
#22, front	*Odocoileus virginianus*	white-tailed deer	2	1
#30, front	*Sus scrofa*	domestic pig	2	1
#32, front	*Ursus americanus*	black bear	3	2
#33, front	*Sciurus* spp.	squirrels	1	1
#16, front	*Meleagris gallopavo,* cf.	wild turkey	1	1
#4, rear	Mollusca	molluscs	53	1
#4, rear	Gastropoda, marine	marine gastropods	5	1
#13, front	Unionidae	familly of freshwater bivalves	1	1

Faunal

A modest number of mammal, bird, and shell specimens were collected by Dowd (Table 5). These particular items are in addition to the faunal remains recovered with the King Helmet Conch shell (see Table 2). Identified species include white-tailed deer, black bear, squirrel, and wild turkey. Some of the bone tools recovered from Qualls Cave are pictured in Figure 23.

FIGURE 23. Sample of bone tools from the excavations. Scale in inches.

Figure 24. Mica fragment. Scale in inches.

Figure 25. Steatite fragment. Scale in inches.

Other

Other materials recovered from the explorations include a mica fragment and a steatite sherd (bowl?). These items are presented in Figures 24 and 25.

Concluding Remarks

The 1969-70 explorations of Qualls Cave documented extensive use of the cave for habitation as well as mortuary activity. The front chamber comprised the primary living area, and the cedar log placed sideways at the narrowest part of the entrance was likely a threshold for some type of barrier (most likely hides) to block out inclement weather. While an unusual mass of headless bodies was defined in a small recess off the front chamber, the rear chamber was extensively used to bury the dead.

There is no good explanation for the mass of individuals (missing their skulls) discovered in the front chamber. While these bones were in much better condition than those exposed in the rear chamber, there were no associated

artifacts to conclusively define these individuals as either prehistoric or historic.

The similarity in burial mode and associated grave goods for the rear chamber individuals suggests they were placed there by the same group of people over a relatively short period of time. The flexed burial positions and select associated burial objects suggest these people were likely interred during the Late Archaic/Terminal Archaic periods.[10] One notable example is the sandal sole shell gorget recovered with Burial 11 (see Figure 8). This particular type of artifact is associated with the Glacial Kame Mortuary Complex found in northwestern Ohio through southern Ontario that dates to the Terminal Archaic and Early Woodland periods (Deter-Wolf and Peres 2014:168). The absence of ceramic objects in Burial 11, or for that matter in any of the rear chamber graves, supports burial during the earlier portion of the mortuary complex.

An additional artifact of note is the King Helmet Conch shell with primarily turtle fragments placed in a pit and initially designated as Burial 19 (see Figures 11-12). A rare artifact such as this from the Key West area of Florida, coming from such a long distance and still preserved, alone warrants writing this article.

The variety of artifacts left behind in the front (living) area denotes cave use by prehistoric Native Americans during the Archaic through Mississippian periods. Recovered projectile points include Middle Archaic through Mississippian types, including Big Sandy, Pickwick, Turkey-tail, Mud Creek, Lowe Cluster, Adena, Motley, Wade, and Madison (Cambron and Hulse 1983; Justice 1987).

Ceramic specimens from the front chamber denoted Woodland and Mississippian occupations. The small percentage of Woodland pottery, composed of plain and cordmarked wares with grit and limestone temper, suggests a somewhat limited use of the cave during this period. Mississippian sherds dominated the ceramic assemblage, and interestingly included several shell-cordmarked and check-stamped specimens with shell temper. These particular wares represent evidence of early Mississippian occupations in the Middle Cumberland region (Norton and Broster 2004; Smith and Moore 2012; Spears et al. 2008). Strap-handled jars in the assemblage indicate use of the cave by later Mississippian groups (Moore and Smith 2009; Smith and Moore 2012).

In conclusion, Buddy and I were sometimes frowned upon for helping out on what were obviously pot-hunting expeditions such as the Qualls Cave work. We felt justified (and still do) because the Eden boys were going to dig the cave whether we helped out or not. The information gathered during this exploration was better than nothing at all. In the past when there were no laws protecting prehistoric sites, many major archaeological sites were looted with no information saved. At least we know a little bit about Qualls Cave and what was found, so it's all in how you look at the situation.

Notes:

[1] Buddy had become good friends with the Eden boys, one reason being their father owned the Bell Witch Cave. Buddy was intrigued with anything to do with the Bell Witch history.

[2] As an example, Buddy and I were invited to accompany two gentlemen who were known relic hunters on a trip about 30 miles from Nashville where they were digging stone-box graves. They said the stone-boxes were different from the Nashville stone-boxes in that they were very large and roomy. We were anxious to learn as much as possible about stone-box graves so we agreed to come along. We worked all day excavating a single stone-

box grave while the other two men each went through three graves looking only for relics. The stone-box we excavated was indeed very large compared to the body-fitting type found in Nashville. At the end of the day, Buddy and I had properly excavated, photographed, and recorded one stone-box grave while the other two men had "pot-hunted" six graves. We sent the skeletal remains from the grave we excavated to the University of Tennessee in Knoxville, gave the associated grave artifacts to the landowner, and recorded the site where it was given a state site number. Did the ends justify the means? We thought so as there were no laws prohibiting the excavation of prehistoric Native American burials at the time.

[3] The Edens, Buddy, and I agreed to work on weekends whenever possible since we all had jobs. Buddy and I tried to be present each time the Eden's were digging in the cave, but that proved impossible. The descent to the cave was steep and could be dangerous. A rope was tied from tree to tree to provide a handhold during the winter months when the descent could be slippery.

[4] Buddy and I both maintained files on this project. Years later, upon Buddy's death, I received his site records. The resulting article represents a compilation of both our file records. I relied heavily on the accuracy of these records since some of my recollections of the Qualls Cave excavation (after 40+ years) were somewhat vague, especially on the sizes of the cave chambers.

[5] The heavy moisture content in the cave made it impossible to use paper bags for carrying out materials, the sacks would get saturated and the bottoms would fall out, so plastic bags had to be used. I found out the hard way that the heavy humidity would have other consequences. I brought along my inexpensive 35mm SLR camera to take pictures inside the cave, and evidently the high moisture caused it to lock up and my camera was ruined. Buddy attempted to take precautions with his newly purchased camera by keeping it in a plastic bag and only bringing it out for brief periods of time to take photos. Unfortunately this did not work and his camera was also ruined.

[6] Dr. Bill Bass assigned student Cheryl Eddy to identify this material. The forty-page report turned into Dr. Bass identified six adults and one small child. Five adults were assigned as male, with the other adult a possible female. She also mentioned in her findings that "hints of Caucasoid affinities exist", but Dr. Bass emphasized that without a skull to examine this suggestion was unsupported. Buddy and myself always suspected these bones were not Native American due to their large size, the soundness of the skeletal remains, and manner of burial. There were no metal items or any type of associated burial objects with the bones, but the mass burial had an appearance of bodies that needed to be hidden rather than some type of formal burial.

[7] As we were leaving the cave that evening, I was climbing the incline loaded down with my backpack and a Coleman lantern in one hand and the shell in the other. I was trying to hold onto the rope with the hand that was holding the lantern, but near the top my hand slipped and I tumbled backward head over heels, finally came to rest on the ledge that overlooked the river. Somehow during my descent I had protected the shell as I might have protected a baby. It would have been a shame that after traveling hundreds of miles, passing from one hand to another thousands of years ago (and staying intact), it would have been busted up by a clumsy white man. Dr. Paul Parmalee of the University of Tennessee, Knoxville first identified this specimen as a King Helmet Conch shell.

[8] We worked in the cave, off and on, for about nine months. Buddy's records showed that 170 man-hours were spent at the site, and around 1000 cubic feet of soil and ash were moved and sifted.

[9] All ceramics were found in the front chamber area. I was able to keep the pottery sherds as the Eden's had no interest in them, and was also able to collect samples of other items such as projectile points, animal bones, and other miscellaneous specimens. On my next trip to Knoxville I took the sherds to Dr. Charles Faulkner at the University of Tennessee for him to identify. Sometime later a student of his traveling through Nashville dropped the box of sherds and a three-page report (Faulkner 1973) off at my house. The modern review results favorably compare with Dr. Faulkner's report, with only slight differences.

[10] An Archaic period habitation (40RB3) recorded above Qualls Cave may be the location where

groups gathered prior to burying their dead in the rear chamber.

Acknowledgements: Nearly all of the artifacts recovered during the excavations were kept by the Eden brothers, and their current location is unknown. Fortunately I had the opportunity to photograph several of these items when originally discovered (including the gorgets and King Helmet Conch shell). I extend my thanks to Sarah Levithol with the Tennessee Division of Archaeology for scanning the available black/white and color negatives.

During the course of the excavations I was able to collect a modest assemblage of ceramic, lithic, bone, shell, and other artifacts that were of no interest to the Eden brothers. For the purposes of this article, most of these items were reexamined by Tanya Peres with Middle Tennessee State University, Department of Sociology and Anthropology (shell and faunal remains), and Mike Moore with the Tennessee Division of Archaeology (ceramics and lithics).

References

Cambron, James W. and David C. Hulse
1983 *Handbook of Alabama Archaeology: Part I, Point Types*. Alabama Archaeological Society, Huntsville.

Deter-Wolf, Aaron and Tanya M. Peres
2014 Embedded: 5,000 Years of Shell Symbolism in the Southeast. In *Trends and Traditions in Southeastern Zooarchaeology*, pp. 161-185, edited by Tanya M. Peres. University Press of Florida.

Dowd, John T. and Kevin E. Smith
2008 *The Southeastern Indian Antiquities Survey (1963-1975) and the Middle Cumberland Archaeological Society (1976-)*. Middle Cumberland Archaeological Society, Nashville. Copy on file, Tennessee Division of Archaeology, Nashville.

Eddy, Cheryl L.
1976 Analysis of Skeletal Remains from Qualls Cave, Tennessee. Paper written for Anthropology 5010 class taught by Dr. William M. Bass, Department of Anthropology, University of Tennessee, Knoxville. Copy on file, Tennessee Division of Archaeology, Nashville.

Faulkner, Charles H.
1973 Quall's Cave Site, Pottery Analysis. Letter report submitted to John Dowd. Copy on file, Tennessee Division of Archaeology, Nashville.

Justice, Noel D.
1987 *Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States*. Indiana University Press.

Moore, Michael C. and Kevin E. Smith
2009 *Archaeological Expeditions of the Peabody Museum in Middle Tennessee, 1877-1884*. Research Series No. 16, Tennessee Department of Environment and Conservation, Division of Archaeology. Nashville.

Norton, Mark R. and John B. Broster
2004 The Sogom Site (40DV68): A Mississippian Farmstead on Cockrill Bend, Davidson County, Tennessee. *Tennessee Archaeology* 1(1):2-17.

Smith, Kevin E. and Michael C. Moore
2012 Changing Interpretations of Sandbar Village (40DV36): Mississippian Hamlet, Village, or Mound Center? *Tennessee Archaeology* 6(1-2):104-138.

Spears, W. Steven, Michael C. Moore, and Kevin E. Smith
2008 Evidence of Early Mississippian Settlement of the Nashville Basin: Archaeological Explorations at the Spencer Site (40DV191). *Tennessee Archaeology* 3(1):3-24.

John T. Dowd
Nashville Tennessee