ARCHAEOLOGICAL INVESTIGATIONS ON ROPER'S KNOB: A FORTIFIED CIVIL WAR SITE IN WILLIAMSON COUNTY, TENNESSEE

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Test excavations on top of Roper's Knob in northern Williamson County exposed Civil War period fortifications and features. The fortifications included a redoubt as well as the rare example of an excavated blockhouse. The investigations also uncovered evidence of a mid-1800s domestic structure likely occupied by the Roper family.

In the fall of 2000, staff of the Tennessee Division of Archaeology conducted test excavations on the state-owned portion of Roper's Knob (40WM101) in Franklin, Tennessee. The site area includes the archaeological remains of an ante-bellum house and a Civil War period Union fortified signal station. The Heritage Foundation of Franklin and Williamson County purchased the Roper's Knob tract in 1994. Partnering with the State of Tennessee, the Heritage Foundation purchased 22.147 acres, and the state later acquired twelve acres of this tract. The state-owned portion is located at the top of the knob where most of the archaeological features are known or believed to exist.

Early History of Roper's Knob

The hill that would become known as Roper's Knob (this name first appears in an 1859 court document) was part of a 2,660-acre land grant that James Robertson, known by most as one of the founders of Nashville, Tennessee, received for service in the American Revolution (Davidson County Deeds, Book D, p. 97). Subsequent land sales broke up the large tract, and in May 1823 John and Cyrus McEwen evenly divided a 310-acre tract that they had inherited from their father David McEwen (Williamson County Deeds, Book G, pp. 378-379). John McEwen's portion of this tract included Roper's Knob, and in 1829 he sold 37 acres, including the knob, to Thomas Hardeman, County Clerk of Williamson County, in trust for Nicholas P. Perkins (Williamson County, Chancery Court Minute Book, 1857-1867, Vol. I, p. 435). The deed from McEwen to Hardeman failed to mention the trust, which would later result in a court battle over ownership of the land (Williamson County Deeds, Book K, p. 208).

Nicholas P. Perkins, a Franklin attorney, paid taxes in 1829 for one free person (himself) and three slaves (Williamson County Tax Records, 1829), and in the following year he paid taxes for five slaves and the 37-acre tract of land that he had purchased from McEwen (Williamson County Tax Records, 1830). Perkins died in 1833 and his heirs, James Perkins, John Perkins, and Ann Elizabeth Knox, began paying the taxes on the 37-acre tract, though none of them lived there (Williamson County Tax Records, 1837-1856). It is shortly after Nicholas Perkins's death that the Roper family shows up in local records.

Historian Park Marshall wrote that Roper's Knob was named for a man named Roper who "lived a great many years on Roper's Knob, but he does not seemed to have owned the land" (Marshall 1970). George W. Roper paid a poll tax in Williamson County in 1833 (Williamson County Tax Records, 1833), and he appears on the 1840 Federal Census in the Eighth District (where Roper's Knob

is located) with his wife, two sons, and one daughter (Federal Census, 1840, Williamson County, District 8). Roper's wife, Agnes, hanged herself in May 1840 (Lynch 1977:34).

The 1850 Federal Census lists George W. Roper and his sons George Jr. and Moody as farmers without real estate. A daughter, Mary Roper, is also listed (Federal Census, 1850, Williamson County, District 8, No. 831). George and Moody also paid poll taxes in 1846, 1849, and 1850, but the Ropers disappear from the local records after 1850. They do not appear in the 1860 census records for Tennessee, Illinois, Missouri, Kentucky, Virginia, North Carolina, Mississippi, Alabama, Georgia, Arkansas, or Texas.

The heirs of Nicholas P. Perkins and Thomas Hardeman went to court in 1859 to settle a dispute over ownership of the 37-acre tract of land. The Perkins heirs won the dispute, and the land was subsequently surveyed and sold (Williamson County Chancery Court Minute Book, 1857-1867, Vol. I, p. 435). These court records provide the first documented use of the name "Roper's Knob." W.H.S. Hill purchased the Roper's Knob tract in April 1860 having bought the adjoining tract to the south in the previous year (Williamson County Chancery Court Minute Book, Vol. I, pp. 450, 524; Williamson County Deeds, Book Z, p. 58-59). Hill, a farmer and surveyor, lived in the East Subdivision of Williamson County in 1860, and owned Roper's Knob throughout the Civil War.

Franklin and Roper's Knob During the Civil War

After the Union victory in the Battle of Shiloh in April 1862, Union troops occupied much of Middle Tennessee including Franklin. Major-General Don Carlos Buell established his headquarters in Huntsville, Alabama and ordered General William Negley at Columbia to begin fortifying the Tennessee-Alabama railroad running from Nashville, through Franklin, Columbia, and Pulaski, to Alabama (Connelly 1979:14-32; War of the Rebellion, Official Records of the Union and Confederate Armies [hereinafter referred to as OR], Series I, Volume XVI, Part 2, pp. 177-178). While work on the railroad continued, two companies of the Seventy-Fourth Ohio Regiment established a guard at the Harpeth River bridges in Franklin (OR, Series I, Vol. XVI, Part 2, p. 261).

Confederate General Braxton Bragg led his army from Chattanooga on August 28, 1862 and marched toward Kentucky. General Buell began withdrawing the Union Army from its garrisons throughout Middle Tennessee and moving his troops to intercept Bragg. The two armies met at Perryville, Kentucky on October 8, 1862, and after a day of fighting, the Confederates withdrew. Bragg took up a new position near Murfreesboro, Tennessee, and General William Rosecrans, now commanding the Union Army, returned his troops to Nashville. Confederate forces once again controlled Franklin (Connelly 1979:55-60; Foote 1986:735-739).

Union General David Stanley, commanding the cavalry of the 14th Corps, moved southward from Nashville on December 12, 1862, skirmishing with Confederates at Brentwood. Stanley's cavalry proceeded to Franklin where it swept aside 400 Confederates under Colonel Baxter Smith. The Union forces destroyed the machinery in a flour mill, captured four wagons full of flour, and destroyed a wagon-load of whiskey and brandy before returning to Nashville (OR, Series I, Vol. XX, Part 1, pp. 76-78).

General Rosecrans moved against Bragg in December 1862. The two armies

fought along the Stones River in Murfreesboro from December 31, 1862 to January 2, 1863, and though the fight ended in a draw, the Confederates withdrew. In February 1863, Union Forces under Brigadier-General Charles Gilbert occupied Franklin. Union Brigadier-General Jefferson C. Davis's forces reinforced Gilbert (OR, Series I, Vol. XXIII, Part 1, pp. 28, 63).

Union forces began reinforcing their positions in Murfreesboro, Triune, and Franklin, and Confederate victories in skirmishes at Thompson's Station and Brentwood gave a sense of urgency to the construction of fortifications. Captain William Merrill, Chief Engineer of the Army of the Cumberland, designed the defenses of Franklin, and the Pioneer Corps oversaw the construction. The main fortification was Fort Granger, located on a bluff of the Harpeth River overlooking Franklin. Roper's Knob and several small artillery positions supported the main fort. Roper's Knob served as part of a chain of signal stations that provided a communications link from Franklin to Murfreesboro. Additionally the knob had a large redoubt capable of holding four large artillery pieces, a blockhouse, cisterns, and a magazine (Dilliplane 1974:1-43; Dilliplane 1975:10-21).

Several skirmishes took place in the Franklin vicinity during the first half of 1863, most involving Confederate cavalry that was raiding Union positions. By June, General Gordon Granger had moved his headquarters to Triune, and Colonel John Baird commanded the Franklin garrison. On June 24, 1863 General William Rosecrans launched an offensive against Braxton Bragg, and succeeded in flanking the Confederates out of their positions in Wartrace, Shelbyville, and Tullahoma. The Confederate Army retreated southward, and Franklin and the rest of Middle Tennessee became relatively secure, with the exception of minor skirmishes and guerrilla activity (Connelly 1979:61-73).

Major fighting returned in November 1864 when General John Bell Hood led the Confederate Army of Tennessee in an attempt to retake the state and draw Union forces out of Georgia. Fierce fighting at Franklin resulted in heavy Confederate casualties. Heavy artillery fired from Fort Granger during the battle, but it is unlikely that Roper's Knob was garrisoned at the time (Sword 1992:185-271).

Historical Information Concerning the Roper's Knob Fortifications

On February 15, 1863 General William Rosecrans ordered that Brigadier-General Charles Gilbert, whose force had just arrived in Franklin three days earlier, "intrench [sic] himself strongly" (OR, Series I, Vol. XXIII, Part 2, p. 71). Captain William Merrill, Chief Engineer for the Army of the Cumberland, arrived in Franklin on March 7 to supervise the construction of fortifications. It is not clear what, if any, steps Gilbert had taken to fortify his position prior to Merrill's arrival. Gilbert's superior, General Gordon Granger, reported to headquarters that the fortifications would be completed in about one week (OR, Series I, Vol. XXIII, Part 2, p. 113). On March 9 General James Garfield, Chief of Staff for General Rosecrans, told Granger to "push forward the fortifications" (OR, Series I, Vol. XXIII, Part 2, p. 123).

On April 7, 1863 General Rosecrans notified General Granger that if he should want to move against the Confederates, he could leave his baggage in the fort under construction under a small guard (OR, Series I, Vol. XXIII, Part 2, p. 219). This message indicates that Fort Granger was making progress but was not finished. Granger told Rosecrans on April 19 that

FIGURE 1. William Merrill's 1863 sketch of Roper's Knob.

"when our forts are done and the guns in position, 2,000 men can hold them against five times their numbers" (OR, Series I, Vol. XXIII, Part 2, p. 254). He stated in this same report, "The fortifications will be hurried to the utmost."

Captain William Merrill's May 29, 1863 report provides the best description of the Franklin defenses. He says that he had been ordered to design fortifications that a small garrison could hold, and that the main defense was Fort Granger on the bluff of the Harpeth River overlooking the town. This fort also had supporting works that guarded the railroad bridge. He says of Roper's Knob:

Roper's Knob, which has the remarkable cross-section shown in the sketch [Figure 1], has a rifle pit just above the terrace which surrounds it – a redoubt for four heavy guns – and a blockhouse for 60 men inside the redoubt. On the crest of the terrace surrounding the crown of the hill is a strong line of abattis. It has likewise two cisterns capable of holding 4500 gallons of water, and a good size magazine. 50 men could hold it against 5000. It is the signal station, being visible in all directions from the range of hills surrounding the large valley in which Franklin lies. It sees all the country within a radius of six miles. It is about 250 ft. above the level of the plain, with steep sides and with no hill higher than 30 ft. above the plain, in its vicinity – excepting the one next, which is in easy musketry range and is lower and inaccessible to artillery (Merrill 1863).

Merrill's report implies that the works were complete. During the construction of the works, there were 5,000 infantry working in 600-man shifts, with two eight-hour shifts per day. The 4th battalion of the Pioneer Brigade, which Merrill had raised himself, oversaw the construction (Merrill 1863).

In October 1864, when Confederates were raiding in the Franklin vicinity, Lieutenant-Colonel Josiah Park, who was then commanding the garrison at Franklin, reported that he could not get artillery on Roper's Knob without machinery, and he asked if he should do it (OR, Series I, Vol.

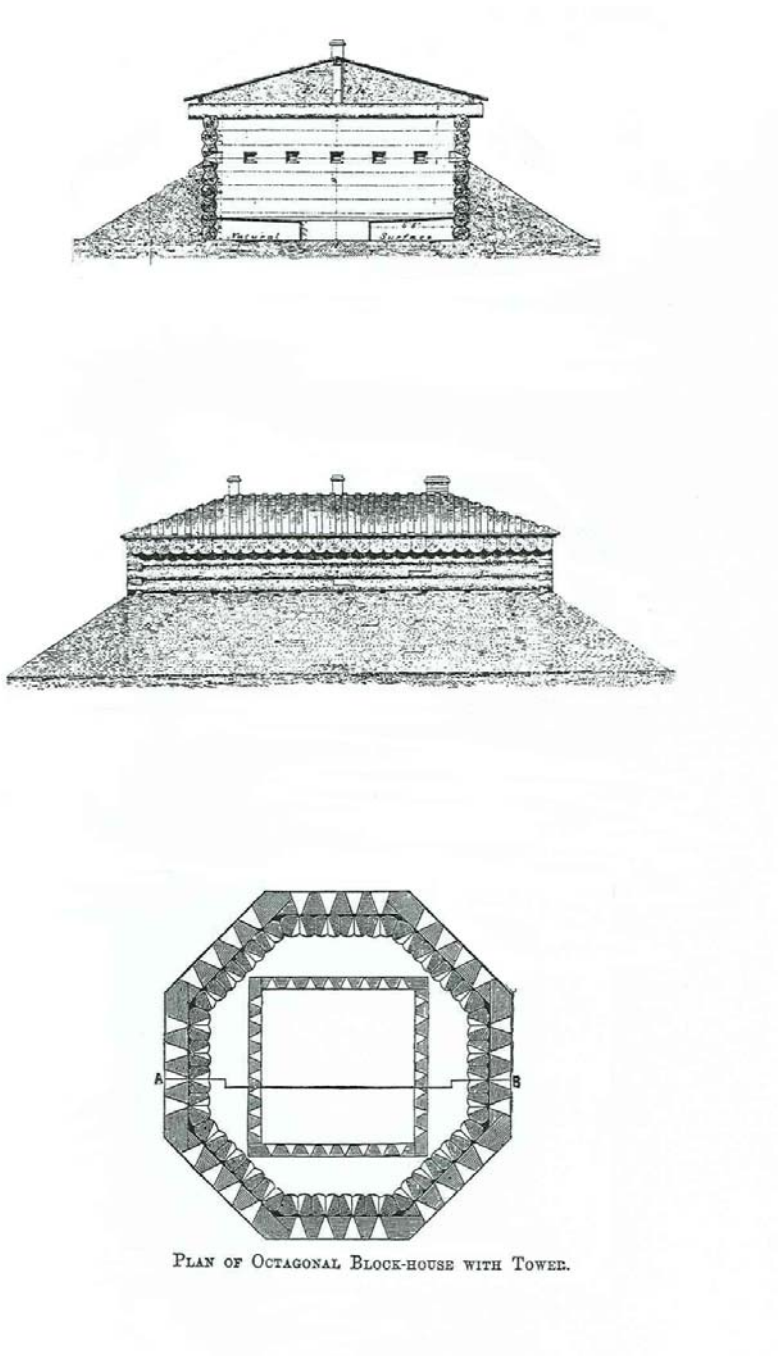

FIGURE 2. William Merrill's sketches of blockhouses, including an example of an octagonal blockhouse.

XXXIX, Part 2, p. 21). It is not clear from written documentation if artillery was ever placed on Roper's Knob. It seems likely that since the redoubt on Roper's Knob was designed to hold four heavy pieces of artillery and the military situation at Franklin in 1863 was somewhat uncertain, there would have been artillery placed there for added defense. It is clear that there was no artillery there in October 1864, and it would seem likely that it was removed during the second half of 1863 when the front lines had shifted southward. One piece of archaeological evidence recov-

ered inside the redoubt that seems to indicate the presence of artillery on Roper's Knob is part of a friction primer used in the firing of artillery.

The artillery would have been inside the redoubt (an enclosed earthen fortification). Redoubts often had formal shapes such as a square, circle, or other polygonal shape, but those built on hills usually conformed to the topography of the hill on which they were constructed. This is not the case with the Roper's Knob redoubt, which appears to be a rectangle with the corners removed. H. L Scott (1864:498-499) states that when artillery is placed in a redoubt, each gun will require 324 square feet. The remaining area in square feet divided by 10 gives the number of men that a redoubt can hold. It is possible that heavy artillery, such as that for which Roper's Knob was designed, would require greater space, and this redoubt contained a blockhouse in its interior thus affecting the minimum number of men required for its defense.

The blockhouse was an important defensive structure that evolved throughout the Civil War (Smith and Nance 2003:144-158). Earlier blockhouses were often two-story structures with overhanging second stories, and early settlers depended on them for defense against Indians. Early use of open stockades for defense of vulnerable railroad lines proved inadequate. In the first half of 1863, seven railroad bridges on the Nashville-Chattanooga Railroad were protected by open stockades in the shape of a cross with arms of equal length (Merrill 1875:439).

General Don Carlos Buell had similarly constructed stockades on the Tennessee-Alabama Railroad in 1862. To be an effective defense the stockade had to be close to the bridge that it was protecting. This proved effective against infantry, but if artillery could be placed so as to fire into an open stockade, they were turned into what William Merrill described as "slaughter pens" (Merrill 1875:441-443).

William Merrill decided that an enclosed blockhouse would be more effective than stockades, and after experimenting by using artillery to blast apart an unused stockade in Lavergne, Tennessee, he also recommended that blockhouses be double cased (built with two layers of timbers) to make a wall about 40 inches thick. Blockhouses were given heavy timber roofs that often had earth piled on them to absorb the impact of artillery projectiles. A board and batten roof kept the earth from washing away. More dirt was piled against the sides of the blockhouse up to the level of the loopholes (firing ports for guns) for added protection. The army furnished the blockhouses with stoves, ventilators, water tanks, and bunks so that the garrison could remain inside the blockhouse (Merrill 1875:439).

Merrill favored octagonal blockhouses, but these were too expensive to build because special skills were needed to cut the mortises and tenons required at the odd-angled joints. He later found a way to build octagonal blockhouses by using simple joints connected by spikes instead of complex joinery, but in the mean time, most blockhouses were built in a square or rectangular plan. There were 54 Union blockhouses protecting the Tennessee-Alabama Railroad in 1864, and during Nathan Bedford Forrest's October 1864 raid and Hood's Middle Tennessee campaign, the Confederates burned all but three. By the end of the war, Union engineers had rebuilt most of the blockhouses using Merrill's simplified octagonal plan as shown in Figure 2 (Merrill 1875:444-446, 452-453).

There is little archival evidence describing the Roper's Knob blockhouse. Merrill (1863) says that the blockhouse

was designed to hold 60 men, but he does not give any other description of the structure. Park Marshall, who was born in Franklin in 1855, later wrote, "A fort was built on [Roper's Knob] and was roofed over" (Marshall 1970). He was probably referring to the blockhouse. Archaeological investigations found that the blockhouse was in the form of a square (43 feet across) with the corners cut off. The blockhouse was eight-sided but not a true octagon.

Signal Stations During the Civil War

One of the important functions of Roper's Knob during the war was its use as a signal station. Major Albert Meyer, organizer of the United States Signal Corps, developed a simplified system of signaling using flags (torches at night). Meyer based his new system on his observations of Comanche signaling while he served with the U.S. Army in the New Mexico Territory. Meyer later tested his system during a campaign against the Navaho. At the outbreak of the Civil War, Albert Meyer reported to Washington where he established an instruction camp for the Signal Corps (Brown 1896: 19-20; 24-39).

The Union Army established a signal camp of instruction in Nashville in February 1862. Lieutenant Jesse Merrill commanded the camp until its disbandment on May 16, 1863 (Brown 1896: 459-460). At this time there were several signal stations in operation in Tennessee, including a chain of stations between Franklin and Murfreesboro. Confederate Captain Edward B. Sayers drew a sketch map showing five of these signal stations including Roper's Knob. Most of the stations shown on the map are about five miles apart. Albert Meyers stated that signals could be read at a distance of eight miles under normal conditions and up to 15 miles under ideal conditions (Brown 1896:93; Sayers 1863).

Signal flags were used in conjunction with a system of telegraphs because each had its limitations. During an attack on the Union forces at Franklin (either General Van Dorn's raid of April 10, 1863 or General Forrest's attack on June 4, 1863), the Confederates cut the telegraph wires between Franklin and Murfreesboro. The Union commanders in each town were able to communicate throughout the skirmish by using the signal stations (OR Supplement, Part I, Volume 10, p. 541).

Signal stations took many forms, and there is no specific information on what the Roper's Knob station looked like. Many stations were wooden platforms built in trees from which the upper branches had been cut. Some were built onto existing buildings. Park Marshall wrote that a pear tree had been left standing half way up the upper part of Roper's Knob while all the other trees had been cleared. Marshall said that this tree had a limb that extended over a tramway, and a rope was placed over the limb to haul artillery up the knob. Marshall observed Civil War events in Franklin when he was a young boy and wrote about them later in life. It is possible that he may be remembering a tree that was left standing for use as a signal station. He also mentioned in his writing that in Fort Granger "the trunks of two trees used as 'spy trees' were left standing within the fort" (Marshall 1970).

Post-War History of Roper's Knob

W.H.S. Hill owned Roper's Knob until 1875 when he sold it, as part of a 180-acre tract, to A. W. Moss. The deed describes part of the property as the "Roper's Knob or Perkins Tract" (Williamson County Deeds, Book 5, p. 327). Own-

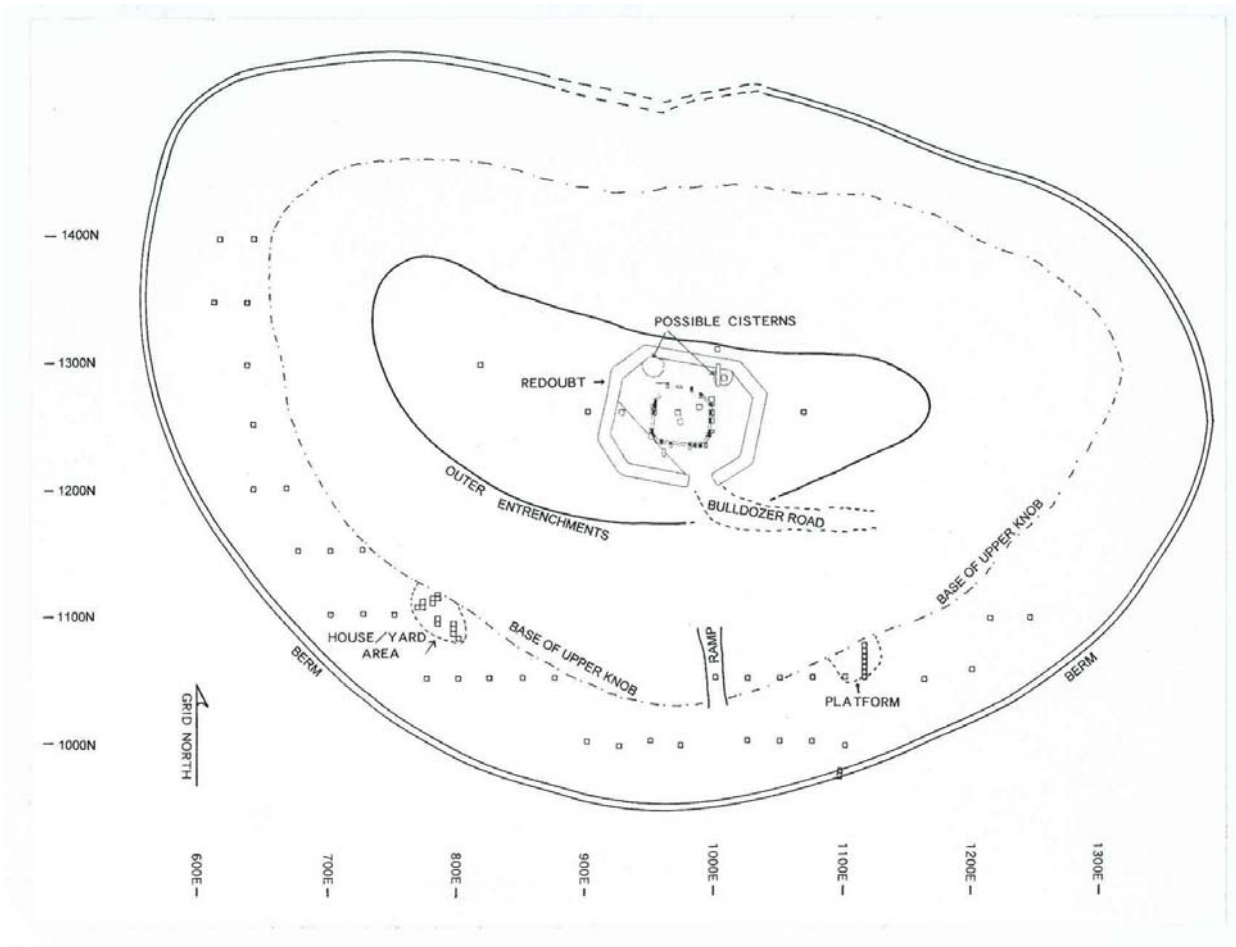

FIGURE 3. Base map of Roper's Knob archaeological site showing location of excavation units.

ership of the property changed several times over the years until the 1994 acquisition by the State of Tennessee and the Heritage Foundation. Throughout its post-war history, Roper's Knob seems to have been a popular place to visit, probably because of the Civil War earthworks and the view afforded by the prominence. Recent activity on the knob has included relic collecting and camping.

Archaeological Investigations

State surveyors established grid points on Roper's Knob prior to archaeological testing. The grid was oriented 37.5 degrees west of magnetic north so that a line could be run straight up the ramp into the redoubt. The site was divided into specific areas for testing, including the Redoubt, Outer Entrenchments, Ramp, Terrace (subdivided into three parts), a Platform near the base of the upper knob, a Berm on the edge of the terrace, and the House and Yard areas (identified from a large pile of brick and stone rubble). These areas are shown on the base map in Figure 3. Excavation units (most of them 4-ft. by 4-ft. squares) were placed based on the presence of surface remains, in areas thought to be likely encampments, and in areas where a metal detector scan indicated the presence of large amounts of metal.

In the area of the House and Yard and the feature referred to as the Platform, culturally related levels were grouped into zones. In the House area, Zone I is defined as the zone of heavy rubble associated with the destruction of the building. Zone II is what lies beneath the rubble, theoretically dating prior to the destruction of the house. The horizontal extent of the rubble was used to define the area of the "House": and the "Yard" was defined as the area outside the heavy rubble. The excavation levels for the Platform were also grouped into two zones. Specific archaeological features were assigned feature numbers (Table 1).

TABLE 1. Archaeological Features.

Number	Type
1	Wall (Parapet) of Redoubt
2	Outer Entrenchments
3	Ramp
4	Possible Cistern (East)
5	Possible Cistern (West)
6	Berm on outer edge of terrace
7	Historic Posthole in 1062N1116E
8	House Foundation
9	Historic Posthole in 1066N1116E
10	Builder's Trench outside house foundation
11	Builder's Trench inside house foundation
12	Blockhouse Wall Trench
13	Probable Posthole
14	Probable Posthole
15	Probable Posthole
16	Probable Posthole

Redoubt

A redoubt is an enclosed earthen fortification that often has a regular form, such as a square or pentagon, or an irregular form following the contours of the land (Scott 1864:497-498). The Roper's Knob redoubt has a regular eight-sided shape as shown in Figure 4. It appears that the knob was leveled off during construction of the fortifications, and the dirt was used to build the redoubt walls.

Excavation units in the center of the redoubt revealed the siltstone bedrock just inches below the surface. Units placed in the northern portion of the redoubt showed a deeper soil, probably a result of leveling the top of the knob. A series of excavation units, each 3-ft. by 4-ft., was placed across a depression that was believed to be one of the two cisterns mentioned by Merrill (1863).

Within a fortification, artillery was usually mounted on a terreplein which is a level space on the interior of the works. The terreplein was raised above the interior surface of the fortification and often covered with wooden planks to make it easier for gun crews to maneuver the artillery piece. The artillery would either fire over the top of the parapet wall (en barbette), or it would fire through an opening called an embrasure. As shown in Figure 4, there is at least one raised area inside the Roper's Knob redoubt that was probably a terreplein. This probable terreplein is in the southwest corner of the redoubt facing downtown Franklin. In the southeast corner of the redoubt, there is a remnant of a possible platform against the inner parapet wall, but this is an area damaged by a bulldozer cut through the wall. There are several openings in the parapet wall of the Roper's Knob redoubt, but all seem to be worn down from years of foot traffic and are not large enough to be embrasure openings. Merrill (1863) reported that the four irregularly shaped battery positions in the vicinity of Roper's Knob were first designed as barbette batteries but were later changed to embrasure batteries.

Cut limestone blocks were observed in some of the worn portions of the redoubt wall, and it is possible that these were taken from the remains of the house located on the terrace below the redoubt. There is weathered and thinly layered limestone or siltstone in other parts of the

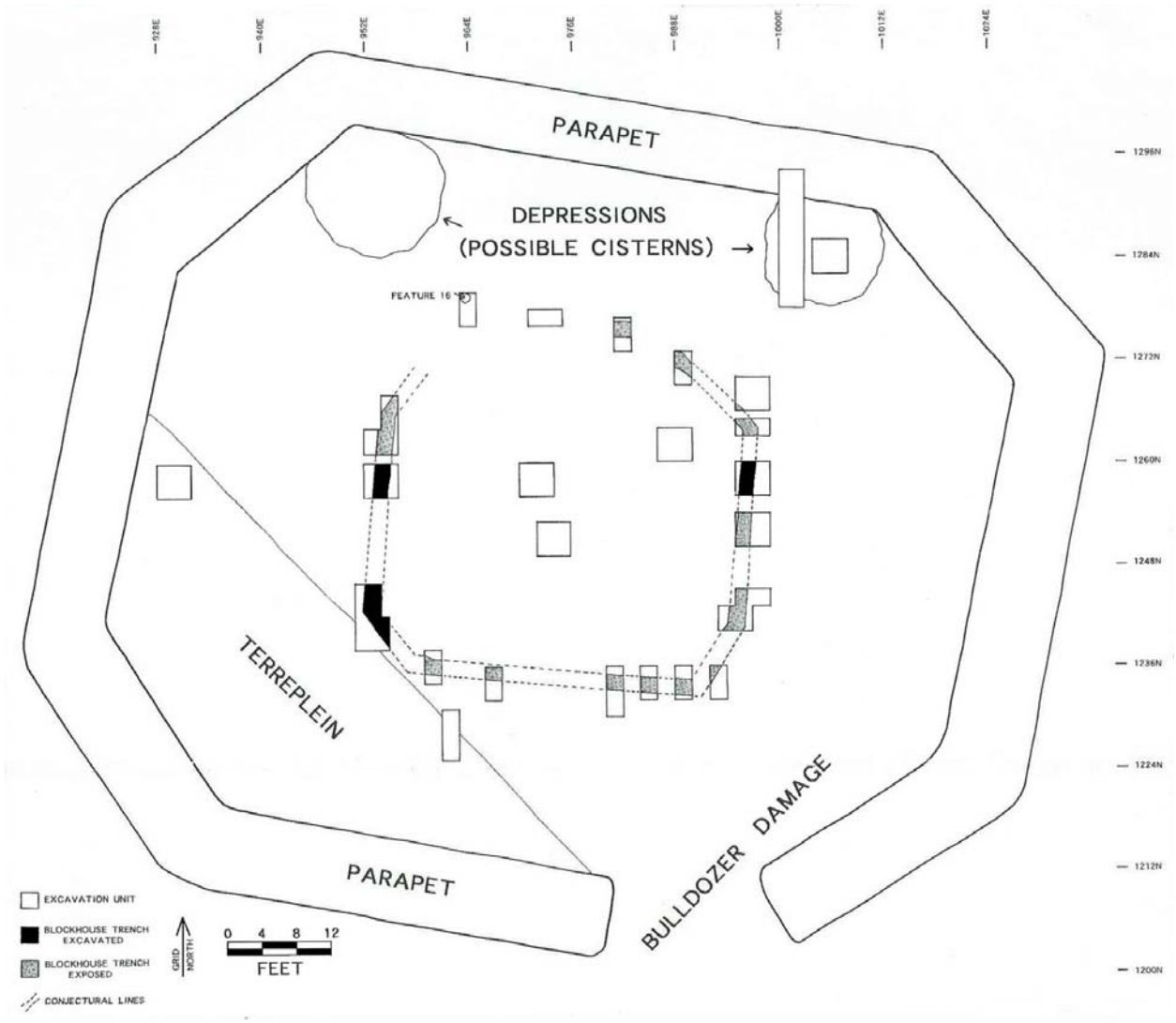

FIGURE 4. Map of Roper's Knob redoubt.

wall, and this is possibly the remains of the knob's natural stratigraphy.

Blockhouse

William Merrill's sketches of typical blockhouses (see Figure 2) show that a footing trench was dug and heavy timbers were placed vertically into the trench (Merrill 1864, Map V). Earth was often piled against the sides of the blockhouse, and this earth is what often remains today. The area inside the Roper's Knob redoubt showed no signs of earthen mounds, and such added protection may have been deemed unnecessary in such an application where the blockhouse was inside a redoubt on a high, steep hill.

Excavation of unit 1256N952E revealed a trench cut into the bedrock approximately 18 inches wide and 24 inches deep (Figure 5). As more brush was cleared from the redoubt during the excavation, it became evident that there was a shallow depression marking the line of the wall trench in some parts of the redoubt,

FIGURE 5. Photograph of section of blockhouse wall trench.

particularly on the east and west sides. By following this depression, several excavation units were placed to reveal the wall trench. Only three portions of the blockhouse wall trench were fully excavated. To save time, the remaining units were excavated only to the top of the blockhouse wall trench (which was then mapped).

The blockhouse wall trench is indicated on the map in Figure 4 as well as conjectural lines showing the probable configuration of the blockhouse. The configuration of the blockhouse appears to be basically square with the corners cut off, making it eight-sided but not a regular octagon. The plan of the blockhouse becomes somewhat unclear on the north side. Here the soil was deeper than in the rest of the redoubt. What appears to be the blockhouse wall trench was detected in unit 1273N981E, the northern most portion of the trench indicated on Figure 4. If this is indeed the outer wall of the redoubt, then the overall configuration is slightly irregular, this wall being farther north than would be predicted. One possibility is that this trench represents part of an offset wall that protected the entrance to the redoubt. Blockhouses usually had such an L-shaped wall in front of the entrance to prevent an enemy from firing directly at the door.

Merrill suggests in his blockhouse sketches that the logs used to construct blockhouse walls should be about 18 inches in diameter. This is the average diameter of the wall trench on Roper's Knob, so obviously the logs used in the Roper's Knob blockhouse were smaller than 18 inches. There was probably no need for the Roper's Knob blockhouse to

be double-cased (i.e. two layers of logs), and no earthen embankment seems to have been added to the structure.

The Roper's Knob blockhouse is significant, being a rare example of an excavated blockhouse in Tennessee. It is unusual because the wall trench is dug into solid stone, which readily reveals the overall shape and size of the structure.

Cisterns

William Merrill stated in his 1863 report that Roper's Knob had two cisterns with a capacity of 4,500 gallons of water (Merrill 1863). He does not state precisely where these cisterns were located, but two large depressions inside the redoubt near the northern slope were suspected to be the remains of these cisterns. The easternmost of these two depressions was tested by excavating a series of 3-ft. wide by 4-ft. long units along the 1000E line to cross-section the depression. One additional 4-ft. by 4-ft. unit was excavated at 1282N1004E. The soil in these units was disturbed, showing little variation in color or consistency. Several large stones were present in these units. These stones may have once been part of a cistern structure, but now occur in disturbed context.

Artifactual evidence from the suspected cistern indicates that the area has been highly disturbed, probably through relic collector activity. Civil War period items such as Minie Balls, percussion caps, one musket band spring, and a friction primer wire were recovered from the cistern units along with much modern material. In addition, several pieces of (probable roofing) tin were removed from these units.

Outer Entrenchments

A line of entrenchments (designated Feature 2) surrounds the upper knob outside the redoubt. The entrenchments are irregularly shaped and follow the contour of the knob. These entrenchments are very pronounced and well preserved around the north, west, and east portions of the knob. They are shallower and more eroded on the south side. A bulldozer road cuts through the entrenchments on the southeast side. One excavation unit was placed in the outer entrenchments on the north side of the knob. The bedrock in this area slopes steeply to the north. Apparently a large amount of fill dirt was used in the construction of the parapet wall of the outer entrenchments on the north side of the knob. Merrill mentions that a rifle pit just above the terrace surrounded the knob.

Ramp

Roper's Knob has an earthen ramp that extends from the terrace to the upper part of the knob where it blends into the natural slope. The ramp provides a uniform slope up to the level of the redoubt. The Union troops used the ramp to haul artillery up to the redoubt. A previous section of this article mentioned that Lieutenant Colonel Josiah Park reported he could not get artillery on Roper's Knob without machinery (OR, Series I, Vol. XXXIX, Part 2, p. 21). Park Marshall wrote that "there was a tramway up the steep part of the knob, up which were hauled the guns by means of block and tackle." He also stated that this tramway had heavy crossties and heavy square wooden beams for the rails, and "an engine and derrick were installed with ropes and drum to draw up heavy artillery" (Marshall 1970). Getting heavy artillery into the redoubt on Roper's Knob was no easy task.

One 4-ft. by 4-ft. unit was excavated on the ramp at 1050N1100E. It is evident

that the ramp was constructed by digging a ditch on both sides of the ramp and piling the dirt in the middle. The natural stratigraphy of the soil is overlain by the inverted stratigraphy resulting from the soil having been removed from the ditch on either side and shoveled into the center to form the ramp.

Platform

This feature is a level area at the base of the upper knob on the southeast side. The platform appears to be man-made. At the time of the excavation, several limestone blocks were visible on the surface as were several recent holes left by relic collectors. One 4-ft. by 4-ft. excavation unit (1050N1100E) was dug near the western edge of the feature. Seven adjoining 3-ft. by 4-ft. units were excavated along the 1116E line to cross-section the feature.

The platform appears to have been constructed by piling dirt behind some sort of retaining wall. Several large stones that may have been part of such a wall were found in the excavated trench, though they appear to have been disturbed. The bottom portions of six possible postholes were found in the units excavated on the platform.

Artifacts recovered from the platform suggest the presence of a structure used for military purposes. Over 700 (n=712) nails were recovered from Zone I of the platform. These artifacts, along with the previously mentioned postholes, point to the existence of some sort of structure. A more complete excavation would be needed to determine the configuration of this structure. A purely military use of the platform and its related structure is suggested by the presence of Civil War artifacts including Minie Balls, percussion caps, and military buttons, as well as the paucity of domestic artifacts.

Berm

The berm (Feature 6) is a slight rise located on the crest of the terrace surrounding the hill. Merrill states in his May 29, 1863 report that "on the crest of the terrace surrounding the crown of the hill is a strong line of abattis (sic)." An abatis is a barricade of felled trees that have had their smaller branches removed and the remaining branches sharpened (Scott 1864:19). The visible rise or berm on the crest of the terrace (or crown of the hill as Merrill describes it) may be related to the abatis, perhaps being the remnant of a shallow trench behind the abatis.

Terrace

The flat terrace of Roper's Knob is located about 80 ft. below the summit of the hill. It is relatively flat on the west, south, and east and somewhat more sloping on the north side of the hill (which is generally steeper overall). A series of excavation units was placed on the west, south, and east sides of the knob as the terrace seemed like a logical place for troops to have camped. Relatively few artifacts were recovered from the terrace test units, but this area has been intensely searched by relic collectors who have reported finding numerous Minie Balls, buttons, at least one bayonet, and other Civil War military artifacts.

House

An area of limestone and brick rubble, clearly visible on the ground surface, indicated the presence of a structure. This rubble was located on the south terrace against the upper knob. For the purposes of this project, the area around the rubble

zone was divided into two areas, the house and the yard. The in-situ portions of the building and the fallen rubble defined the house. Most of the rubble appeared to be the result of a chimney fall at the east end of the building. The house was divided vertically into two zones. Zone I defined the vertical extent of the rubble, and included the excavation unit levels within the rubble area. Zone II included those levels below the horizontal extent of the heavy brick and limestone rubble (thought

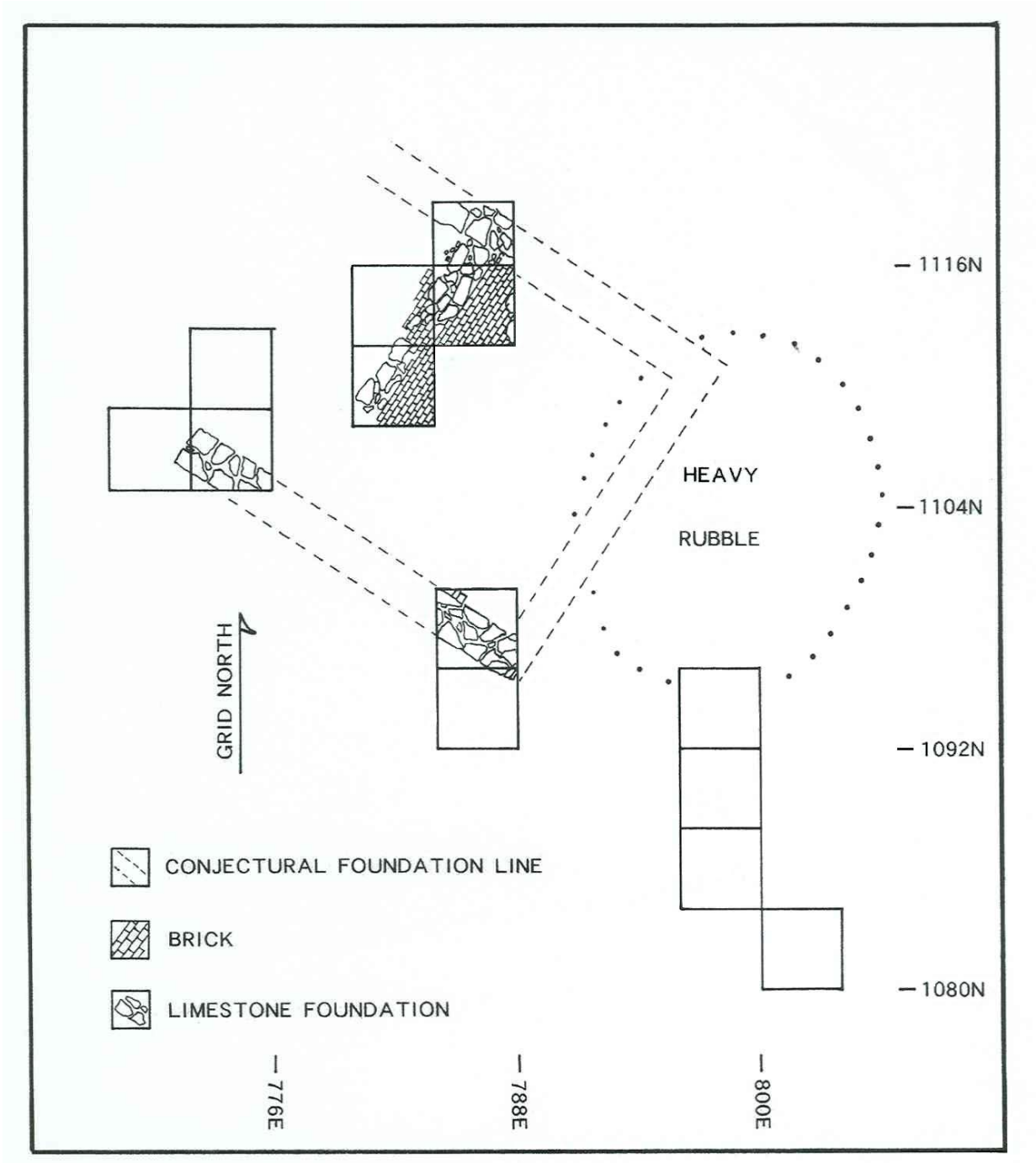

FIGURE 6. Map of excavation units in the house and yard area.

FIGURE 7. House remains including north foundation wall, cross wall, and portion of brick floor.

to represent the time period before the house destruction). The yard was defined as the area outside of the horizontal extent of the heavy rubble, but still in the general vicinity of the house.

Figure 6 shows the placement of excavation units in the house and yard area as well as the portions of the house foundations uncovered during the investigations. Initial excavation in the house/yard area was a series of 4-ft. by 4-ft. units along the 800E line. Subsequent excavation units revealed portions of the house foundation (designated Feature 8). The foundation, made from limestone blocks, was 24 inches thick and extended well below the ground surface.

The excavations also uncovered the remnants of a stone cross-wall in the house (Figures 6 and 7). This wall likely postdates the original house as it was built on top of a brick floor. The purpose of this wall is unknown, but it may indicate some attempt at house repair. Also, the west side of the house had no foundation wall. This unusual attribute was confirmed by the absence of a builder's trench. The overall dimensions of the house were 18 feet by 30 feet. The massive foundation wall suggests the entire house was made of stone, or at least had a lower floor (or above-ground basement) of stone with a wooden structure over it. There appears to have been a stone chimney with a brick firebox on the east end of the structure.

Most of the historic artifacts from 40WM101 came from the house and yard area. The documentary and archaeological evidence suggest the house was occupied for a relatively short period of time

FIGURE 8. Stone carvings found on Roper's Knob.

(no earlier than 1829 and no later than 1863). The house was probably destroyed in 1863, with the materials used in the construction of the Civil War fortifications.

Stone Carvings

Several carvings in the stone outcroppings on Roper's Knob include names, initials, and dates (Figure 8). Carvings observed during the test excavation project appear on the upper knob near the earthworks, with the exception of one loose stone found near the house. The carved dates range from 1870 to 1935. However, some undated carvings seem to be recent. This early form of graffiti is evidence of the popularity of Roper's Knob as a spot to visit following the war. The Union army had cleared the trees off of the knob, providing an unobstructed view of the surrounding countryside. In addition, the earthworks themselves were a likely attraction.

Analysis of Historic Period Artifacts

A total of 5,445 historic period artifacts were recovered during the Roper's Knob excavations (Table 2). Also found were 340 artifacts classified as "Miscellaneous Modern," 642 pieces of faunal material, and 866 prehistoric artifacts. Historic artifacts were analyzed and tabulated using a system modified from South (1977:95-96) in which artifacts are divided into functional groups and then subdivided into classes. This modified system has been used for prior Division of Archaeology projects including Fort Southwest Point and Fort Blount (Smith 1993; Smith and Nance 2000). This article also includes a

TABLE 2. Distribution of Historic Period Artifacts.

GROUP AND CLASS	South Terrace	West Terrace	East Terrace	House Z I	House Z II	Yard	Platform Z I	Platform Z II	Redoubt	West Side of Redoubt	East Side of Redoubt	Feature 1	Feature 2	Feature 3	Feature 4	Feature 6	Feature 10	Feature 11	Feature 12	SITE TOTAL	% of Site Total
KITCHEN GROUP	61	88	18	942	235	366	56	0	150	19	3	0	2	1	40	1	6	0	299	2,287	42.00
ARCHITECTURAL GROUP	59	105	19	1,284	163	184	735	0	205	18	0	0	0	0	61	0	4	0	28	2,865	52.62
FURNITURE GROUP	0	1	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0.17
ARMS GROUP	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0.11
CLOTHING GROUP	0	1	0	11	0	2	7	0	2	0	0	0	12	0	0	0	0	0	1	55	1.01
PERSONAL GROUP	0	0	0	3	0	0	1	0	1	0	0	0	0	0	2	0	0	0	1	8	0.15
TOBACCO PIPE GROUP	0	0	0	6	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	10	0.18
ACTIVITIES GROUP	5	5	7	49	7	2	37	0	20	7	0	0	0	0	1	0	6	0	3	149	2.74
CIVIL WAR GROUP	1	1	0	12	0	1	32	0	5	0	0	0	0	0	2	0	0	0	2	56	1.03
SITE TOTAL	126	201	44	2320	405	557	868	0	385	44	3	0	14	1	106	1	16	0	335	5,445	100
PERCENT OF SITE TOTAL	2.31	3.69	0.81	42.61	7.44	10.23	15.94	0.00	7.07	0.81	0.06	0.00	0.26	0.02	1.95	0.02	0.29	0.00	6.15	100	

"Civil War Military Artifact Group" previously used to classify Civil War material recovered from the Carter House in Franklin (Smith 1994:70).

The "Civil War Military Artifact Group" shows those items associated with the primary historical event that affected Roper's Knob. Relatively few military artifacts were recovered from the site area, a fact that reflects the extensive collecting of such artifacts on this and most other Civil War sites. Several collectors that had searched the site (with permission of the landowner when it was privately owned) shared information on their finds with the author. Artifacts mentioned as found included such items as Minie Balls, Burnside's Cartridges, bayonets, military buttons, one silver-plated Union belt buckle, and a scabbard tip.

Kitchen Group

The Kitchen group includes ceramics, glassware, tableware, kitchenware, and bottle glass. The 2,287 artifacts recovered from Roper's Knob make up 42.1% of the total number of historic period artifacts. The largest single class within the Kitchen group is ceramics.

The 874 ceramic sherds recovered from Roper's Knob consist of porcelain, creamware, pearlware, whiteware, coarse earthenware, and stoneware. These sherds represented a variety of decorative types and vessel forms. Identified individual vessels (minimum of 45) include plates, cups, bowls, pitchers, jars, and vessel lids.

A mean ceramic date was calculated for the house/yard area of Roper's Knob using the formula developed by South (1977:217-218, 236). As expected, the sherds from Zone II of the house yielded an earlier date that those of Zone I. Taken together, the ceramics from the house and yard yielded a mean ceramic date of 1848.1.

Two hundred ninety-one fragments of dark olive wine bottles were recovered, with the majority of these items coming from the house and yard area. One characteristic observed on these bottles is an applied lip. This bead of glass, added after the bottle was sheared from the blowpipe, is characteristic of bottles manufactured between 1840 and 1870. Some of the fragments denoted a bottle that was blown into a mold but the neck hand-finished, suggesting a manufacture date between 1845 and 1885 (Newman 1970:72-75). A pontil scar, caused by the use of a tool attached to the base of a bottle during finishing, was evident on a base

fragment found in the yard area. Pontils were used in bottle manufacture before 1870 (Jones 1971:68-72). These suggested dates fit well with the occupation period of the house.

Other Kitchen Group artifacts include one fragment of a square-sided case bottle, two fragments of tumbler glass, 39 pieces of pharmaceutical bottles, 365 pieces of general bottle glass, and 73 pieces of glassware that were pieces of two decorative serving dishes. Six pieces of tableware were recovered as well as 636 fragments of kitchenware (most of which was miscellaneous tinware).

Architectural Group

This group, comprised of artifacts related to the construction of buildings, is the largest single group from the Roper's Knob site with 52.8% of the total historic artifacts. Window glass totaled 1,016 pieces, of which roughly 94% came from the house/yard. Two formulae were used to calculate a manufacture date for the glass based on the thickness. Window glass thickness increased through the nineteenth century, and each formula assumes a straight-line progression of this trend. Ball (1982:13) developed a formula based on samples from several sites (primarily in Kentucky). Moir's (1987) formula, as quoted in Meyers (2001:69), is slightly different. Applying each formula to the glass found in the house/yard area of Roper's Knob produced the results shown in Table 3. Meyers (2001:69) states that Moir's formula seems to be accurate to within 15 years for sites in Tennessee.

TABLE 3. Dates Based on Window Glass Thickness.

Formula	House Zone I	House Zone II	Yard
Ball	1806.9	1806.2	1807.9
Moir	1812.5	1812.1	1814.6

Nails and spikes recovered from Roper's Knob total 1,812 specimens. Nails comprise the largest single class represented in both the redoubt (n=255) and platform (n=712). A total of 672 nails were recovered from the house/yard. Thirteen of the fourteen spikes came from the redoubt and associated features. Most of the identifiable whole nails were machine-made with an approximate date range of 1830-1885 (Edwards and Wells 1993:56, 61-62).

Thirty-eight artifacts classified as Construction Hardware include construction staples, roofing tin, a pintle, iron hinge, and iron escutcheon.

Furniture Group

Eight of the nine artifacts assigned to the Furniture Group came from the house area. Items in this group include lantern wick adjustors, a hasp, brass escutcheon, iron wing nut, and upholstery tacks.

Arms Group

The Arms Group consists of artifacts associated with firearms, but does not include the Civil War period artifacts. Six artifacts were recovered, five of which came from the house. One .65 caliber musket ball, thought to be pre-Civil War, was found in Feature 12 (the blockhouse trench). Additional specimens were three gunflints and two lead shot.

Clothing Group

Thirty-nine artifacts belonging to the clothing group were recovered during the investigations. These items include buckles, buttons, straight pins, hook and eye fasteners, shoe parts, and a strap slider. Although this category does not include military buttons, it is possible that military

TABLE 4. Distribution of Civil War Military Artifacts.

	South Terrace	West Terrace	East Terrace	House Z I	House Z II	Yard	Platform Z I	Platform Z II	Redoubt	West Side of Redoubt	East Side of Redoubt	Feature 1	Feature 2	Feature 3	Feature 4	Feature 6	Feature 10	Feature 11	Feature 12	SITE TOTAL	%
Minie Ball																					
.54 cal.	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5.4
.58 cal.	0	1	0	1	0	1	6	0	3	0	0	0	0	0	1	0	0	0	0	13	23.2
melted	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1.8
William's Cleaner, .58 cal	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1.8
Bullets																					
.45 cal.	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3.6
.54 cal. (Sharp's)	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3.6
Casings																					
.32 cal. Rimfire	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1.8
.32 cal. Centerfire	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1.8
PERCUSSION CAP, rifle	0	0	0	2	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	24	42.9
PERCUSSION CAP, pistol	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1.8
Fragment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1.8
BUTTONS																					
Large, Brass, Eagle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1.8
Small, Brass, Eagle	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	5.4
MUSKET BAND SPRING	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1.8
FRICTION PRIMER WIRE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1.8
TOTAL	1	1	0	12	0	1	32	0	5	0	0	0	0	0	2	0	0	0	2	56	100

personnel used some of the civilian type clothing items. Sixteen clothing items came from the house/yard area, and one derived from the west terrace. Seven clothing artifacts (including five buttons) came from the platform, a feature that seems to have had a military function. Twelve shoe tacks were recovered from the outer entrenchments (Feature 2) and one bone button came from the block-house wall trench (Feature 12).

Personal Group

The Personal Group includes items presumably owned and used by individuals. Eight personal items recovered from Roper's Knob consist of two pencil fragments, three comb pieces, one specimen thought to be a piece of jewelry, and two finials from canes or umbrellas.

Tobacco Pipes

The Tobacco Pipe Group is a modified category for all smoking paraphernalia (Smith and Nance 2000:139, 251). Eight fragments were found in the house/yard area, and two were recovered from the redoubt. The ten pipe fragments recovered from 40WM101 consisted of eight pieces of stoneware stub-stemmed pipes and two kaolin pipe sections.

Activities Group

The Activities Group contains several classes of artifacts that pertain to a variety of activities. The group as proposed by South (1977:96) includes such classes as construction tools, farm tools, toys, fishing gear, storage items, stable and barn, miscellaneous hardware, and military objects. Not all of these classes are represented in

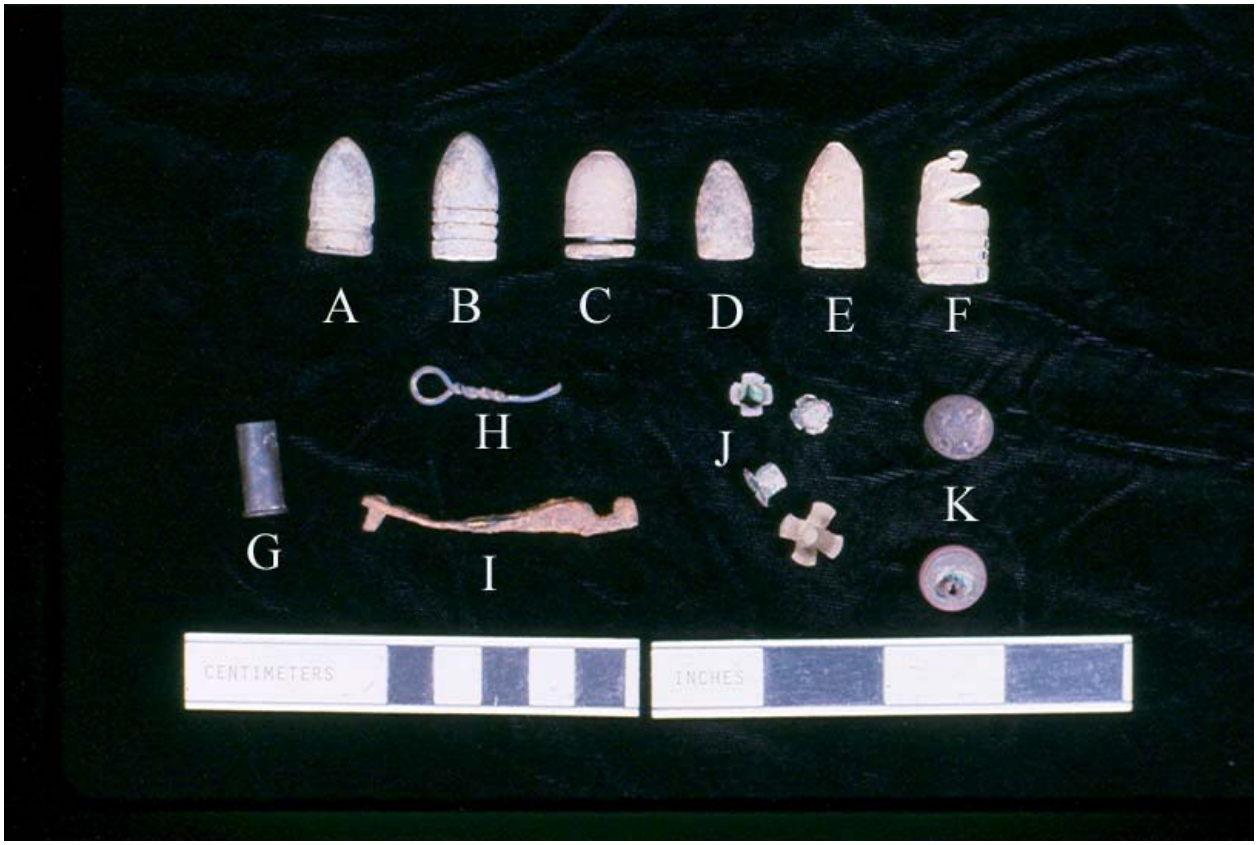

FIGURE 9. Civil War Military Artifacts: A. .54 cal. Sharp's carbine bullet, B. .58 cal. minie ball, C. .54 cal. William's Cleaner bullet, D. .45 cal. bullet, E. .58 cal. minie ball, F. Carved minie ball, G. .32 cal. shell casing, H. Friction primer wire, I. Musket band spring, J. Percussion caps, K. Federal uniform cuff buttons.

the Roper's Knob collection. The 148 artifacts classified as belonging to the Activities Group comprise just 2.7% of the total number of historic artifacts.

Among the Activities Group artifacts recovered from Roper's Knob are 42 items classified as Stable and Barn artifacts. Thirty-two of these artifacts are horseshoe nails, with the largest concentration (n=16) coming from the platform. Sixty-seven artifacts concentrated in the house, platform, and redoubt areas fall under the Miscellaneous Hardware category. One interesting item found at the house was a button mold used for casting metal buttons.

Civil War Military Artifact Group

The Civil War Military Artifact Group is not part of South's (1977:95) original classification scheme, but has been used elsewhere to account for these particular artifacts (Smith 1994). Table 4 lists the 56 Civil War artifacts recovered from Roper's Knob. Many of these artifacts were situated among larger rocks that would have shielded them from detection by relic collectors. Collectors interviewed during the project reported finding military buckles, bayonets, bullets, and Burnside type casings. The cavalry used Burnside carbines, and the presence of Burnside casings (assuming the reports are accurate) may indicate the use of Roper's Knob as a cavalry outpost and observation point.

Representative samples of the Civil War artifacts are shown in Figure 9.

Minié Balls. Minié Balls, named for Claude Etienne Minié, were improvements over the standard round ball. The conical shape and hollow base meant that the projectile would expand when fired and grip the spiral rifling of the weapon's barrel (Lord 1965:15) for greater range and accuracy. Of the 18 Minie Balls recovered from the site, 13 are .58 caliber and three .54 caliber. One partially melted example could not be measured. The remaining bullet is a type called a William's Cleaner. This particular bullet has a plunger at the base and a small flange that was compressed when fired so that the flange scraped the barrel, cleaning residue left from burning gunpowder.

Four other bullets were retrieved during the investigations. Two are .45 caliber, but no further information could be determined about them. Two .54 caliber Sharp's type bullets were also found. All specimens were found in Zone I of the house.

Two .32 caliber shell casings were recovered from the site, one rimfire casing and one centerfire. Neither item was marked with headstamps.

Percussion Caps. Percussion caps are small brass caps that contained mercury fulminate. This crystalline compound (made from a blend of mercury, alcohol, and nitric acid) exploded when forcibly struck. The mercury fulminate in the brass cap sent a spark into the barrel of a musket, thus igniting the powder and firing the weapon. Twenty-six specimens (25 whole and one partial) were found during the excavation. Twenty-two of these derived from Zone I of the platform. One of the caps recovered is small, indicating that it was used for a pistol rather than a musket.

Musket Band Spring. One musket band spring was recovered from the redoubt. The band spring holds the musket band in place when it is slid onto the stock. This example is made of iron.

Friction Primer. The brass wire portion of a friction primer was recovered from Feature 4 (the suspected cistern). A friction primer is a hollow brass tube filled with gunpowder, with a piece of wire pushed into and perpendicular to the tube. The tube is placed into the touchhole of a cannon, and a lanyard is attached to the wire. When the lanyard is pulled, the friction ignites the powder, thus firing the cannon.

Other Artifacts

Additional artifacts recovered from Roper's Knob (but not included in Table 2) include 642 pieces of animal bone and shell; materials such as brick, mortar, charcoal, and coal; and 340 artifacts classified as Miscellaneous Modern Material.

Conclusions

One of the goals of the test excavations conducted on Roper's Knob was to assess the extent of archaeological remains on the site for the purpose of their long-term preservation. Roper's Knob went through two phases that left distinct archaeological remains. These phases are: (1) the domestic occupation during which a house was constructed on the terrace of the knob and inhabited probably no more than 30 years, possibly by the Roper family; and (2) the military occupation of the site during the Civil War when fortifications were constructed on the knob. Historical documentation provided insights into both of these phases and helped predict the types of archaeological remains that might be present.

By piecing together the available

documentary and artifactual evidence, it is possible to infer a general history of the house. The house was likely built, or at least begun, by Nicholas P Perkins sometime between 1829 and 1833. Following his death in 1833, Perkins heirs retained possession of the land but didn't actually live there. The Roper family appears to have lived on the site (possibly) as early as 1836 and (at least) as late as 1850, but were clearly gone by 1859.

Construction of the fortifications on Roper's Knob began in February 1863, and were probably completed by May of that same year. The house was likely dismantled and the material used in the construction of the fortifications.

The visible (above ground) and archaeological features of Roper's Knob comprise an important historical resource that is well worth preservation and further study. This resource includes the archaeological remains of a house dating from the first half of the nineteenth century, and, more importantly, examples of blockhouse construction, earthen fortifications, a signal station, and troop encampments. The wall trench of the blockhouse, cut into solid bedrock, is an unusual Civil War military feature that deserves more archaeological attention. There is also the potential for locating the remains of the two cisterns and the magazine.

The State of Tennessee and the Heritage Foundation of Franklin and Williamson County took the initial step in the long-term preservation and interpretation of Roper's Knob by purchasing the property. At this time, the site area continues to suffer from extensive relic collecting, camping, hiking, and dirt bike riding. However, a long-term goal is to open Roper's Knob to the public with hiking trails access and interpretive signage. To successfully accomplish this goal, a spirit of cooperation will be required between the State of Tennessee, the Heritage Foundation, the City of Franklin, and local landowners.

*Notes***.** Unpublished reference sources used for this work include bound transcriptions and microfilm copies of Davidson and Williams County records at the Tennessee State Library and Archives in Nashville (originals in the Davidson County Courthouse in Nashville, and Williamson County Courthouse in Franklin). Also used were microfilm copies of 1830-1880 United States Census Reports for Tennessee Counties at the Tennessee State Library and Archives in Nashville.

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