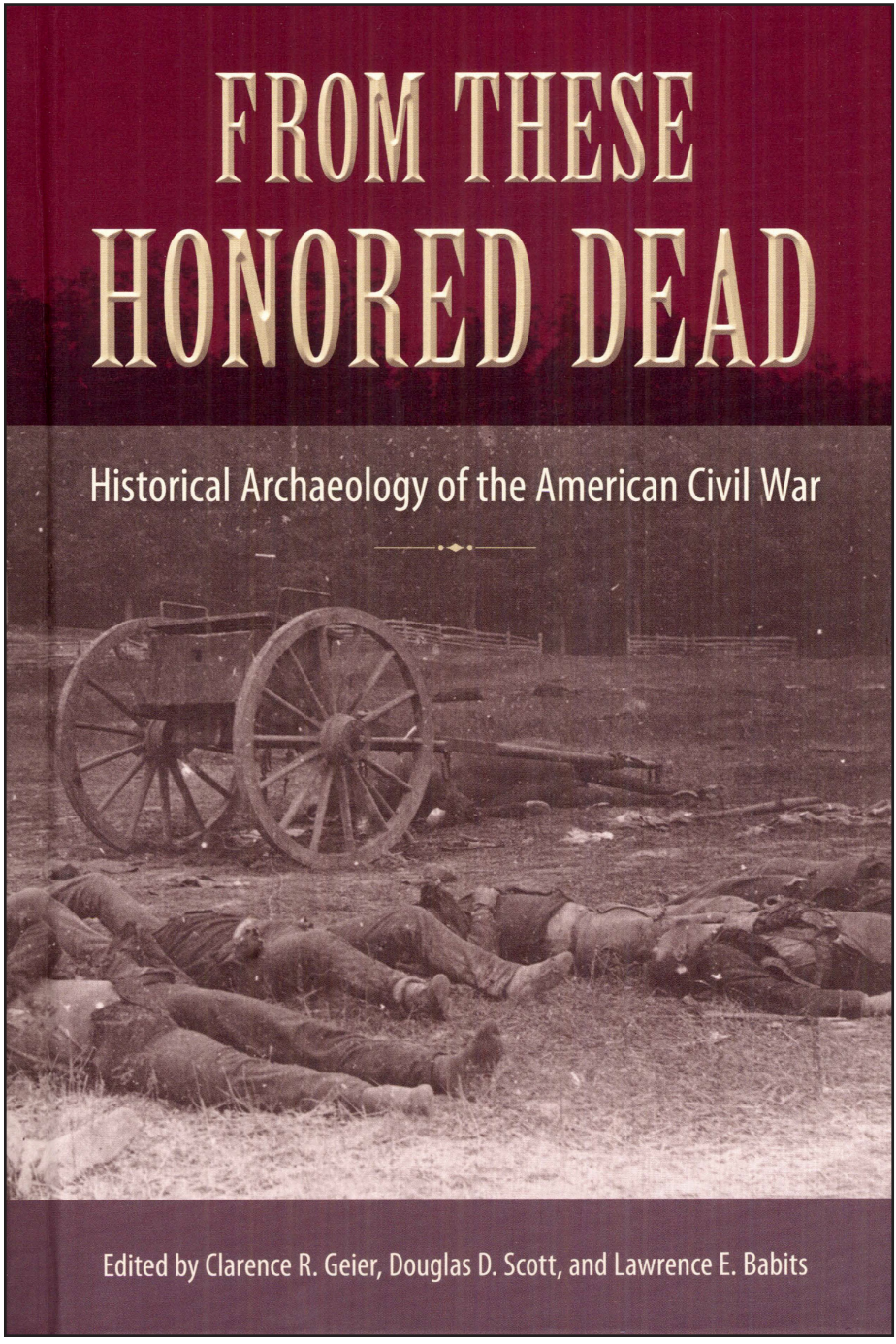

ARCHAEOLOGY / HISTORY / MILITARY

"Civil War enthusiasts will find the investigations in this book fascinating. A cadre of skilled, veteran archaeologists covers the continent—including camps and battle sites in Virginia, Kentucky, Texas, Missouri, Florida, and South Carolina."
—**ROBERT K. KRICK,** author of *Stonewall Jackson at Cedar Mountain*

"*From These Honored Dead* is a significant addition to the literature on the archaeological study of the American Civil War, and of conflict in general."
—**WILLIAM B. LEES,** executive director, Florida Public Archaeology Network

"Demonstrates the value in an archaeological approach to battlefield and related sites."
—**DAVID R. BUSH,** author of *I Fear I Shall Never Leave This Island*

Separating myth from fact, *From These Honored Dead* uses historical archaeology to uncover the truth in the many conflicting memories of the American Civil War that have been passed down through generations.

By incorporating the results of archaeological investigations, the essays in this volume shed new light on many aspects of the Civil War. Topics include soldier life in camp and on the battlefield, defense mechanisms such as earthworks construction, the role of animals during military operations, and a refreshing focus on the conflict in the Trans-Mississippi West. Supplying a range of methods and exciting conclusions, this book displays the power of archaeology in interpreting this devastating period in U.S. history.

Clarence R. Geier is professor emeritus of anthropology at James Madison University and a coeditor of *Huts and History* and *Archaeological Perspectives on the Civil War*. **Douglas D. Scott** is retired from the National Park Service, teaches archaeology at Colorado Mesa University, and is the author of *Uncovering History: Archaeological Investigations at the Little Bighorn*. **Lawrence E. Babits** is professor emeritus and former director of the Maritime Studies Program at East Carolina University and a coeditor of *The Archaeology of French and Indian War Frontier Forts*.

Cover: Dead Confederate artillery men and horse as they lay around their battery after the Battle of Antietam. Photograph by Alexander Gardner, 1862. Courtesy of the Library of Congress.

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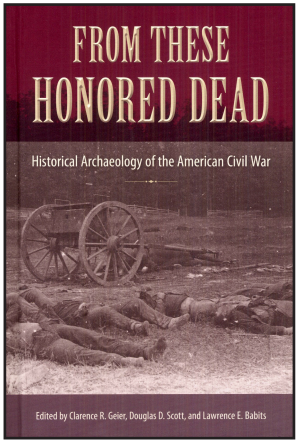

From These Honored Dead: Historical Archaeology of the American Civil War

Clarence R. Geier, Douglas S. Scott, and Lawrence E. Babits, Editors. 2014. University Press of Florida, Gainesville, Florida. viii+322 pp., 64 figures, 10 tables, 1 appendix, references, index. $39.95 (cloth).

Reviewed by Jonathan E. Reyman, Curator of Anthropology, Illinois State Museum, Springfield.

Some book covers grab the reader's attention by the title or a striking graphic; this book cover does both. As the editors cite, the first part of the title—from these honored dead—is taken from Lincoln's Gettysburg Address (p. 1). The cover photograph, uncredited but probably taken by Matthew Brady or Alexander Gardner (or another of Brady's assistants), shows a limber with the dead horse still in harness and the remains of four soldiers, presumably artillerymen, in the foreground. It is a dark photograph, both in tone (the colors of old, dried blood) and content, and it brings to mind, at least for this reviewer, Lincoln's First Inaugural Address with its phrase, "mystic chords of memory, stretching from every battlefield and patriot grave." If not in a grave, per se, the battlefield dead lying here, both animal and human, foreshadow much of the content of this book.

Fourteen chapters cover battlefields, bivouac areas, camps, and forts and range over a dozen states and territories; alphabetically Arkansas, Colorado, Florida, Georgia, Kansas, Kentucky, Missouri, Nebraska, New Mexico, South Carolina, Texas, and Virginia. One chapter focuses on the issue of horse-and-mule logistics and another on a specific gun, the IX-inch Dahlgren #FP573. Geographically the coverage is broad, and the amount of detail should satisfy the most avid Civil War buff. Although this book is written for professional archaeologists and historians, I think Civil War enthusiasts will find a great deal of useful information within its pages, if for no other reason than avocational archaeologists with metal detectors contributed significantly to the findings. This is not to suggest that "treasure hunters" or collectors with metal detectors should scour Civil War battlefields—far from it. But, in concert with professional archaeologists, they can find common ground and interest by working together on projects. I reviewed a book a few months ago in which the author argued that archaeologists would benefit from a better knowledge of native history. I agree, and this volume demonstrates the converse: battlefield and war historians would benefit from a better knowledge of archaeological site investigations on their fields of study.

Let me begin with a comment about the University of Florida Press, which has a well deserved reputation as a fine academic publisher. It is disconcerting that the press has not served its editors and authors as well as it might because it printed sub-par graphics to accompany some chapters. I have good eyesight, but Figure 1.2 (Battlefield of Wilson's Creek, Missouri) and Figure 1.3 (Battlefield of Pea Ridge, Arkansas), are printed so small that a magnifying glass must be used to read the wording and to see many of the details. The same is true for the circles and triangles in Figure 2.2, and for the information in

Figures, 3.1, 5.1, 6.1, 6.2, 10.3, 12.1, 14.1, 15.1 (bottom), 16.2, and 16.3, all of which should have been printed larger. Figures 8.2 and 10.2 needed sharpening, and Figure 12.2 (Overlay of excavations on engineer plan of Fort Putnam) requires color to make clear the overlays depicted. Indeed, the use of color throughout with the now standard Confederate red and Union blue for the battlefield maps to show troop placements and movements (e.g., Figure 4.2, Figure 5.1, and 5.2) would have been a welcome improvement.

Now on to the review of the book, but full disclosure requires I reveal that I'm a Civil War Union re-enactor, most recently at the 150th Anniversary of the Battle of Brice's Crossroads, Mississippi, which was originally fought on 10 June 1864. The battle is not covered in this volume, though the Brice's Crossroads battlefield, largely intact, would be a prime candidate for the archaeological investigations reported herein.

Re-enactments are scripted for accuracy, to best use available resources, and for safety. The scripts are based on what we know of the battle from first-hand accounts, various types of reports, both military and civilian, and from analyses by historians. This volume, with its detailed descriptions of the weapons used, where they were used and by whom, and the inferences drawn about troop movements during the encounter can be an invaluable resource for re-enactors to improve their re-enactments and understanding of the Civil War events. This book should find a strong readership among re-enactors, especially those who pride themselves on re-enacting with historical accuracy to the extent that we can know what actually happened. From time-to-time I comment below on how the research would be of use to re-enactors.

Douglas Scott, perhaps best known for his excellent work along with Richard Fox, Jr. at the Little Bighorn Battlefield National Monument, begins this volume with his chapter on the trans-Mississippi West where Union volunteers found themselves not fighting Confederate soldiers but more often Native American warriors who "threatened to disrupt economic assets that were vital to the survival of the Union, that is cross-country telegraph communications, mining, ranching, and farmsteading" (p. 7). I think the threat was more perceived than real, although it became real following the tragic Sand Creek Massacre (pp. 22–23) in Colorado, after which the Union commander, Col. John Chivington, the hero of the Union victory at La Glorieta Pass, New Mexico, lost his command, and John Evans, the Colorado Territorial Governor, was forced to resign. Nevertheless, Scott demonstrates, as he did at Little Bighorn, that the archaeological investigations at the Sand Creek site, including the use of metal detectors, greatly improve our understanding of what happened on 29 November 1864. The same is true for the battles of Rush Creek and Mud springs, Nebraska.

Scott argues that the Battle of Honey Springs, Oklahoma on 17 July 1863 was as significant in the West as were Vicksburg and Gettysburg (p. 7), and there is no question that the battle was the climatic engagement of the Civil War in Indian Territory. But the victory at Vicksburg split the Confederacy and gave the Union control of the Mississippi. Gettysburg marked the effective end of the offensive efforts by the Confederates, after which the war was one of attrition leading to Appomattox. Both Vicksburg and Gettysburg were much more significant than Honey Springs, in my estimation.

To understand conflict archaeology from the military perspective, one must understand both military terms and the concept of "battlespace" (p. 9). Scott describes and explains these in an exemplary manner which is a "must read" for the remainder of the volume. However, an error in military word usage, or perhaps only a typographic error, occurs on p. 20: Scott notes that logistics in the Trans-Mississippi Theater "were not as poorly organized or strapped for war material as is often portrayed in the literature. I agree, but material should properly read *matériel,* as per military usage (the term originated in France in 1819). Scott also states, "simple artifacts have the potential to aid in reconstructing historical events while leading to a better understanding of the broader context in which those events played on the stage of history" (p. 14). This reminds me of the point made by the late James Deetz in his seminal 1977 book, *In Small Things Forgotten: An Archaeology of Early American Life,* required reading for all archaeologists. Not to quibble with Scott about semantics, but I would argue that we weren't in the Trans-Mississippi Theater, so what we do is a construct and not a reconstruction of historical events. The same point pertains to the use of reconstruction in other chapters.

The chapter by **Scott, Stephen Dasovich, and Thomas Thiessen** is notable for several reasons. It provides an excellent short history of the first battle of Boonville, Missouri; it points up the value of private collections of battlefield artifacts (p. 34); it dispels the myth that the troops on both sides "were poorly armed with the dregs of the U.S. arsenal system" (p. 40); and it demonstrates that the Missouri State Guard did not "skedaddle" en masse—the so-called Boonville Races"—as commonly thought, but that some held their ground against the advancing Union forces (pp. 40–41). From a re-enactor standpoint, these findings are important. Another important point is that the Confederate commander, Maj. Gen. Sterling Price, suffering from severe diarrhea, left for home before the battle really got underway, and thus left his troops without proper leadership (pp. 26, 29). This is an early example which highlights the role of disease in the Civil War. More troops died from disease than from musket balls, artillery, and other ordnance; more were debilitated on a daily basis by illness than by wounds.

The same three authors, in reverse order, discuss the 27 September 1864 massacre and battle at Centralia, Missouri to determine whether it really was a massacre and whether the actions of the Confederate guerillas constituted war crimes. They provide a fine summary of what happened that day in and around Centralia but note (p. 44) that resolution of the disagreement among the Centralia historical source materials about what actually happened requires "some additional filter to rigorously test the sources' veracity." The filter is historic battlefield archaeology, and their conclusions are it was a massacre and the Confederate actions constituted war crimes in terms of both Civil War and the modern rules of war. The most interesting and curious graphic is Figure 3.2—"Surgeon's sketch of [Union survivor] Frank Barnes's wound locations" (complete with pubic hair) made for his pension files.

Charles Haecker discusses the Battle of Palmito Ranch, Texas (12-13 May 1865), the final battle of the Civil War. By that time, Lee had surrendered to Grant at Appomattox (9 April 1865), Joseph E. Johnston had surrendered to Sherman at Bentonville, North Carolina (18 April 1865), and the assassinated President Lincoln had been entombed in the receiving vault at Oak Ridge Cemetery in Springfield, Illinois (4 May 1865). But in Texas, the war wasn't over, although it was lost, and the losers, the Confederates, were ironically the victors in this final battle.

No good military reason existed for this battle. As Haecker states (p. 57), there was a tacit agreement that further bloodshed was needless. The agreement ended on 27 April "when the newly appointed Union commander of the Texas coastal island of Brazos Santiago, Col. Theodore Barrett, took charge." Haecker provides two possible reasons why Barrett broke the unofficial truce: to obtain horses for his dismounted cavalry; and to gain battlefield glory before the war ended (p. 59). But the war had ended, for all intents and purposes, and Barrett obtained neither horses nor glory: the Palmito Ranch battle was an embarrassment to the Union Army (p. 61), and it cost the life Pvt. John J. Williams of the 34th Indiana Volunteers, the last Union direct battlefield death of the Civil War (pp. 60–61). However, the archaeological investigations did satisfy the primary goal of the project, "providing physical proof that battlefield-related artifacts are present within the western one-third of Palmito Battlefield National Historic Landmark" (p. 70).

As a side note, Although Private Williams was the last direct battlefield death, men on both sides of the conflict continued to die from their wounds after the war was over—often long after it was over. Most notable, perhaps, is Brig. Gen. Joshua Lawrence Chamberlain who died on 24 February 1914 (age 85) of wounds received at the siege of Petersburg in 1864 which, once infected, never healed (Handley-Cousins 2013). Thus, Chamberlain was the last Civil War soldier to die of battlefield wounds. Deaths such as his, and re-evaluations of Census data and other records, have led some scholars to upgrade the number of deaths to 750,000 and possibly as many as 850,000 (Hacker 2011), rather than the previous figures of 644,000–650,000.

Robert Jolley's survey of two battlefields in the Shenandoah Valley begins with a caution after citing the documentation he uses: "Each source needs to be evaluated, as some accounts may be biased or inaccurate" (p. 72). Indeed, almost every chapter in this volume evaluates such records via field research. For example, Jolley states that "Maps produced by military engineers...are considered one of the best sources of information, as they depict the location of troop positions during different stages of the battle" (p. 72). He provides two such maps, and notes that "The validity of both maps needs to be verified by archaeological investigations" (p. 72). As noted earlier, both maps would have been much more useful had Union and Confederate positions been indicated by blue and red. The verification Jolley proposes will be of great interest and value not only to archaeologists and military historians, but also to re-enactors. The field methods, as with other chapters in this volume, involve the use of metal detectors in both transect and intensive surveys and key personnel included avocational

metal-detectorists (pp. 75–76). Predictably, those with the most experience and best equipment produced the best results.

At the Third Battle of Winchester (Winchester reportedly changed hands 72 times during the Civil War), Jolley chose to investigate the left flank of the Confederate position because it was "a fixed position with excellent historic documentation" (p. 78). The results confirmed some of the historic documentation but also contradicted some reports by Union regimental commanders (p. 81). Jolley also concludes that the Federal troops were well armed whereas the Confederates "used outdated uniforms with obsolete Federal unit designations...civilian flat buttons (suggesting civilian clothing), and captured Federal equipment" (p. 83)—although some Confederate cavalry units used "Richmond Sharps carbines, a more sophisticated weapon than previously indicated" (p. 82).

The second engagement investigated was the Battle of Front Royal. "The investigations failed to discern any artifact patterning for the 1862 Battle of Front Royal" (p. 84), perhaps because of the "ephemeral nature of the event" or possibly because much of the battlefield has been destroyed by subsequent development (p. 84). Together, Jolley's research "validates the need to examine all historic sources and to conduct historic background research" before and after field investigations (p. 86).

John Bedell and Stephen Potter provide an extensive overview and discussion of Lt. Gen. Jubal Early's July 1864 raid on Washington, D.C., especially the fighting that took place around Fort Stevens and Fort DeRussy. The result of their investigations "was the documentation of an almost forgotten battlefield and preservation of a small piece of America's Civil War heritage" (p. 88). Pieces of that heritage are constantly disappearing, so preservation of even a small piece is important.

The authors point out that there are numerous accounts of the battle from the Union side but only Early's brief account for the Confederates. So the battlefield investigations had the potential to reveal significant new information, not the least of which is that "The site [within Rock Creek Park] still has great potential for more research... and because it is already within a national park, it is protected from the development that now covers much of this and other battlefields" (p. 102).

Steven Smith's chapter on South Carolina is one of the most extensive spatially and one of the most far-reaching in its implications, beginning with his note that archaeologists are using their assets at hand to "develop and archaeological perspective of the war distinct from the perspective provided by historic documents alone" (p. 105). Moving to the end of the chapter, Smith makes a strong case for collaboration with "relic collectors" (pp. 117–118). He notes that archaeologists must build bridges with collectors; that collectors are an important resource because, "with very rare exceptions, all reasonably accessible battlefields, earthworks, camps, and other military features have lost their most detectable metallic artifacts to collectors" (p. 117). Lamenting this is pointless, and "archaeological battlefield interpretations must address missing collections" (p. 117). Furthermore, collectors save sites because archaeologists cannot be everywhere; they can

do systematic location and recording of data; they don't sequester artifacts in museums, as archaeologists do; and by displaying their finds at shows, they reach a much larger population than do museums when the "new trend in museology is that museums must entertain using interactive graphics and child friendly exhibits that include few artifacts. What other conclusion will the public make than that archaeology is irrelevant, redundant, or unapproachable?" (p. 118). As Smith further states, "It is a conundrum that must be faced. The public is largely interested in things. Things can be found and displayed by anyone with a metal detector. Why archaeology or the archaeologist?" (p. 118).

From my perspective, Smith's comments are spot on. I made a recent visit to the National Museum of Scotland in Edinburgh which is crammed with things in an amazing building complex. For the better part of two days I roamed the place transfixed by the displays of things and regretting that the U.S. is going largely in the opposite direction, having forgotten that things, per se, can educate and entertain when they have the proper signage.

Smith's chapter is the first of several to discuss how underwater archaeological investigations using a perspective known as KOCOA analysis (**K**ey terrain; **O**bstacles, **C**over and concealment; **O**bservation and fields of fire; and **A**venues of approach (plus weather) produced a variety of results for battlefield sites now periodically underwater, such as Battery Wagner (inconsistently referred to as both Battery Wagner and Fort Wagner). Underwater archaeology was also fundamental in the recovery of the Confederate submarine, *H. L. Hunley* (pp. 107–108).

Earlier research at Camp Baird supported later findings at Folly Island, perhaps most importantly that "standard shovel testing is a poor method for revealing the integrity or potential of Civil War campsites" (p. 112). Metal detecting is more practical and cost effective. At Fort Johnson, archaeologists unexpectedly found the artifact assemblage from the four-year Confederate occupation was much smaller in quantity than the Union occupation of only a few weeks, which they attributed to the superior resources of the North's industrial machine over the resources available to the Confederate army (p. 113). Smith concludes with Henry Glassie's words regarding Civil War archaeology: "The past is too important to leave to historians. The human reality too important to leave to novelists" (p. 118). To which one might add, and Civil War battlefield archaeology is too important not to include relic collectors with metal detectors in the mix of sources for information.

In their introduction to Part II, the editors state, "the life and circumstances of the common soldier, as individuals and members of armies, is becoming of increased popular and scholarly interest" (p. 120). As a re-enactor, I would modify the term "common soldier" because, based on my experience, many, perhaps most of these soldiers were anything but common in courage and bravery, strength, loyalty, and their ability to cope with hardships and adversity.

Clarence Geier and Alyson Wood begin this section with a close look at Maj. Gen. Philip Sheridan's Army of the Shenandoah at work in the Shenandoah Valley generally considered the "breadbasket of the Confederacy." So when Sheridan's

troops burned the valley (9 October 1864) and finally drove the Confederates out of the valley at the Battle of Cedar Creek on 19 October 1864 (p. 124), the South lost its main source of food for its soldiers and provender for its horses and mules. Union troops' scavenging for food (p. 129) exacerbated the South's predicament throughout the area. Furthermore, after the South lost its two main sources of horses—Kentucky and Tennessee—the Shenandoah Valley was of increased importance for procurement of these animals, and Sheridan's ultimate victory deprived the Confederates of this resource as well. This will be further discussed in the review of Chapter 11.

Geier and Wood provide an excellent overview of the course of the battle, but their focus "is on the successful identification of the position occupied by Brig. Gen. Wesley Merritt's 1st Division [cavalry camp] within the extensive prebattle Union encampment" (p. 128). Once again, conventional shovel test pits were of no value for locating sites in the survey phase (this is the last time I'll note that shovel testing was not useful for locating Civil War battlefield sites. From here on out, the reader should assume they were tried and found wanting and inappropriate as a field method); systematic and controlled metal detecting located the site (p. 133). A detailed discussion of their findings follows which results in the successful location of Merritt's "massive cavalry encampment" (p. 140).

As a child I visited Montepelier, President James Madison's home. There was no mention at the time, probably because no one knew, that the estate "contains an extensive complex of Civil War encampments occupied by...Lee's Army of Northern Virginia" (p. 141). Furthermore, as **Matthew Reeves** notes, "The military occupation of these domestic sites provides vivid evidence for the impact that troops had on the local area despite being a 'friendly' occupation." The Confederates were there for nine months (p. 141). The camps occurred during the "transition from slavery to freedom for millions of African Americans [and] While the campsites mark but a brief period of tactical deployment of troops during the Civil War, it marks the terminal end of centuries of slavery for enslaved families...The interaction between troops and the civilian population during this encampment period was undoubtedly contentious" (p. 142). One of the more interesting findings is that later in the encampment period, McGowan's Brigade (and other Confederate troops) apparently moved their campsites to obtain firewood and not for tactical reasons (p. 144). As noted earlier, metal detecting was the best method for locating sites, and the more experienced the operator, the greater the success (p. 146). Finally, Reeves' analysis contrasts regional and nation cultural contexts to provide "the potential for the study of military encampments to advance the discipline of historical archaeology beyond the particularistic study of military phenomena" (p. 157).

Joseph Balicki sought to locate the Milton's Mill, Virginia bivouac (short-term occupation) site for the 14th Connecticut Infantry, an ill-fated unit that "sustained the highest percentage of loss of any Connecticut regiment (p. 164). The bivouac site was located based on physical evidence, e.g., buttons with Connecticut State insignia and discarded

ammunition and historical research (p. 167). Balicki provides a wealth of detail on the artifacts found, especially ammunition, but also equipment, accoutrements, uniform parts, and weapon fragments—but he notes "Artifacts reflecting camp life, personal activities, and personal possessions are rare" (p. 172). He also discusses camp organization, a useful contribution for comparison to information in other chapters. Two conclusions from this study are "that the entire regiment could have camped at the site," and that frontline, bivouac camps are markedly different in content and context than "permanent camps, camps of rear echelon troops, and winter quarters" (p. 176).

Napoleon reputedly said that an army travels on it stomach. But as **Joseph Whitehorne** demonstrates in his must-read chapter, horses and mules by the millions were essential to both sides to provide the food for the armies, and most other supplies. Railroads didn't go everywhere, especially in the South; roads and trails did, and horses and mules provided animal mobility to pull wagon trains, artillery and ambulances, as well as making cavalry possible. Once the South lost control of the Mississippi, other rivers, and their coastal ports, horses and mules became even more important, yet as the war dragged on, the South was increasingly unable to procure sufficient equines for its needs. The North did much better, but even it suffered from insufficient numbers of animals. When one considers that an estimated 3–3.5 million horses, mules, and donkeys were killed during the Civil War (curiously, the editors [p. 121] and not Whitehorne provide this figure, but see also Parker 2004–2015), one begins to realize the enormity of animal involvement in the war and how critical they were to the military. Yet, as Whitehorne notes (p. 177) "Very few students of the Civil War have paid sufficient attention to the logistical problems intrinsic to animal-powered mobility of large nineteenth century military forces."

Consider this: "between September 1864 and April 1865, the animals of the Army of the Potomac consumed 562,000 bushels of corn; 5,244.000 bushels of oats; and 54,442 tons of hay; and required 1,696 tons of straw" (p. 178). This was for only one Union army, and there were 10 major Union armies. As Whitehorne further notes: "it was estimated that 75 wagons of grain per day were required to support the horses and mules used by Maj. Gen. George Meade's army in the earlier Gettysburg Campaign. During the approach to that Pennsylvania town, planners also had to arrange for over 35,000 Union animals to have the daily opportunity to drink over 350,000 gallons of water without polluting human access" (p. 178). Furthermore, "The estimated 83 1/2 miles of men, animals, and rolling stock had to be coordinated for these needs to be met without eroding tactical cohesion en route" (p. 178). One full-strength cavalry regiment required 1,200 horses; each artillery battery required 110 horses (p. 178). It was a logistical nightmare. For instance, an estimated 3,000+ horses and mules were killed at Gettysburg (**Figure 1**)—one battle—and had to be replaced (Parker 2004–2015).

When the war began, neither side had the requisite veterinary support, and neither side ever had sufficient veterinarians available (pp. 186–187). At the outset, there were only about 50 professionally trained veterinarians in the United States, "most of them foreign born and trained at the Royal Veterinary College in London" (p. 186). One

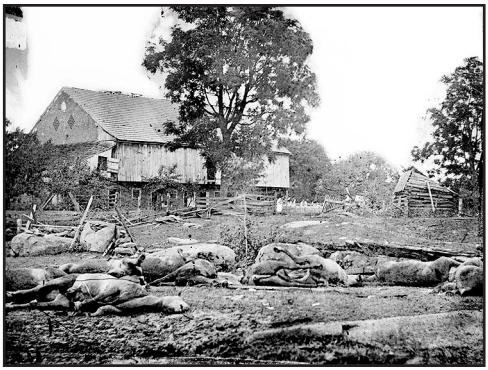

Figure 1 Dead horses and mules at Trostle Farm, Gettysburg. National Archives.

consequence was that the horses and mules suffered: when sick, they received little or no proper care, and disease, especially glanders, killed huge numbers (p. 189). As Whitehorne writes, "By the end of 1862, the Confederate army was losing 20,000 horses annually, three-quarters of which were victims of disease, hunger, and poor treatment" (p. 188). And it got worse as the war continued. Horses were often ridden or otherwise used until they were unfit for service. In the South, the average life of an artillery horse was about 71/2 months while that of a mule was 371/2 months (p. 189). For the war as a whole, the average life for a horse or mule in battle was 5–6 months, and the fact that soldiers aimed for cavalry horses or for the horses and mules that pulled artillery, lessened their expected lifespan. One of the most iconic images of the Civil War is **Figure 2,** taken by Alexander Gardner, of a Confederate colonel's dead horse (the colonel was also killed), probably hit by canister or other artillery shell in its side facing the camera.

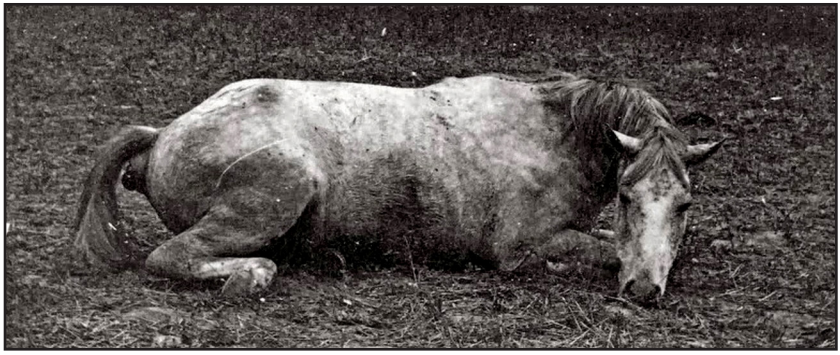

Figure 2 Confederate colonel's dead horse, Antietam. Photograph by Alexander Gardner.

Horses were seriously injured or killed at an appalling rate. The 60,000-man Union cavalry acquired over 284,000 horses in 1861 and 1862 (p. 183); these weren't enough. In fiscal year from June 1863 to June 1864, the U.S. purchased 188,178 horses, captured another 20,000 (p. 185), still insufficient numbers. Grant and Meade went south in May 1864 with 113,864 cavalry and artillery horses and 258,000 mules pulling 4,300 wagons, but this met only about half the animal requirements (p. 185). The purchase and capture of more than 200,000 horses left them short of the numbers their armies required (p. 186).

The issues of horse-and-mule logistics didn't end with the animals and their need for food, water, and care. As Whitehorne (*passim*) makes clear, procurement logistics also included millions of shoes and nails, including 70 million shoes from the Henry Burden Iron Works in Troy, New York (p. 181). Military units also needed blacksmiths to operate forges, farriers to shoe the animals, tack and the saddlers to care for and mend it, wagons, and a host of other equipment and accoutrements. A farrier friend (Almart personal communication 2015) tells me that a cavalry horse in regular use must be reshod about every four weeks. The Union could barely meet this requirement; the Confederates couldn't even come close. Toward the end of the war, the Confederate military mobility collapsed from a lack of horses and mules (p. 190). As animals were taken from civilian sources—farms, plantations, and cities—the Confederacy was further hampered in its ability to feed itself and move goods from one place to another. It became an increasingly cruel war of attrition which Maj. Gen. William Tecumseh Sherman expressed succinctly and well: "War is cruelty. You can't refine it. The crueler it is, the sooner it will be over." To understand Sherman's point fully, especially from a non-human focus, one must read Whitehorne's chapter.

Part III consists of five chapters addressing a variety of topics: "defense and earthwork construction, collateral damage, and an ongoing study of military artifacts" (p. 191). These are some of the most interesting reports in the volume.

W. Stephen McBride, Kim A. McBride, and J. David McBride investigated the site of Fort Putnam at Camp Nelson, Kentucky. The structure was bulldozed in the 1960, so the three authors aimed to provide further interpretation to the public and to reconstruct the wood-reinforced earthen structure (p. 193). Overall the excavations "were successful in discovering fort construction features and adding significantly to our understanding of this fort's appearance and construction methods" (p. 204). A unique aspect of the fort's history is its "construction by soldiers from the Engineer Battalion of the 23rd Corps" rather than by impressed and escaped slaves and prisoners (p. 196). One of the more interesting discoveries was two different types of revetment walls—one sloped, the other straight – which the authors suggest is possibly explained by Capt. Poe's desire to have his engineer battalion learn different construction methods (pp. 204–205). They also found this fort was apparently never used for shelter, as indicated from the lack of domestic artifacts (p. 204).

I mentioned earlier my objection to the use of the term reconstruction. The authors admit they did not know "exactly where the fort and its features was positioned on the

ground" (p. 199), and other details were unclear (pp. 199–200), including "How Poe connected the two different revetment walls" (p. 204). This is the nature of archaeology; it is not an exact science of discovery and recovery. Therefore, the end result, shown partly in Figure 12.5, is a construction, not a reconstruction. This does not detract from what is otherwise an excellent example of archaeological investigations at the site.

Peter Leach, Kerri Holland, and Joseph Balicki review the application of magnetic prospecting methods at known Union bivouac sites from the 1863 Mine Run Campaign. As they note, "Civil War campsites can be large and complex archaeological sites that span many acres and often contain countless artifacts as well as dispersed and disturbed features" (p. 207). The main focus of this chapter is to integrate magnetic prospecting with standard archaeological and metal-detection field methods (p. 207). The site under investigation is a "mostly plowed Civil War Federal regimental camp" (p. 207). Field work included 369 shovel test units, only five of which contained artifacts (p. 209). This again demonstrates that shovel testing is not an effective method for these sites. Leach, et al. provide an excellent overview of magnetometry methods and the interpretation of results (pp. 210–216). They discuss "ground-truthing" magnetic data (pp. 216–217), an essential field method. Their results show "magnetometry to be a highly effective tool for establishing archaeological context in Civil War camp sites when combined with metal detector surveys and mechanical stripping" (p. 220). Although magnetometry has limitations, it has "the potential to offer greater insights" (p. 221) when used judiciously.

C. Brian Mabelitini investigates the Hammond Landing Battery, a Confederate feature on the Apalachiola River in Florida. "The defense of the Apalachiola River was of strategic military and economical importance to the Confederacy" (p. 222). He provides a history of the battery and why it was important, then essentially proposes to test Zedeño's argument "that places are not only a product of human behavior, but they also define and constrain human behavior"—they "are a form of material culture through human action altering the environment" (p. 226). Mabelitini employs KOCOA analysis (see above and the Appendix).

Hammock Landing has three key terrain features: high ground, the artillery road, and potential river landings (p. 227). As a re-enactor, I am aware of the importance of the high ground: attacking the enemy by moving uphill is an inferior staging position in concept and exhausting in practice. I want to occupy the high ground when attacked. The failed Confederate attacks against the Union position on Little Roundtop at Gettysburg constitute an excellent demonstration of this principle.

Mebelitini discusses Gun Emplacement 2 at some length. A drawing of the emplacement with a cannon would have been helpful, as would have been consistency in the use of metric measurements and English measurements (see especially p. 232). Among the author's conclusions is that "The disparity between the [field fortification] manuals and the actual work indicates that the batteries had been hastily constructed using available

materials" (p. 237). Desperate times called for desperate measures, and this battery reflects that. Finally, Mabelitini's analysis confirms a successful test of Zadeño's argument.

Sometimes underwater salvage archaeology produces spectacular results, e.g., the raising of the *H. L. Hunley.* And sometimes it produces the story of a gun—the IX-inch Dahlgren #FP573—and raises unanswered questions while providing new information. **Lawrence Babits, Christopher Amer, Lynn Harris, and Joe Beatty** have given us an intriguing mystery: how did a union cannon get to Mars Bluff, a Confederate navy yard on the Pee Dee River?

Dahlgren IX-inch cannons were special guns: some 1,185 were produced during the Civil War and not one of them burst in action (p. 240), as opposed to other cannons manufactured by both the North and South. "The Mars Bluff IX-inch Dahlgren has not been fully recorded, because it is still partially embedded in the river bottom and any excavation is subject to rapid filling" (p. 240). The authors provide a fairly detailed description of the gun, but a schematic drawing is required for a fuller understanding that Figure 15.2, an 1864 Matthew Brady photograph of a Dahlgren and crew on the USS *Miami*, just doesn't allow. For example, those not familiar with Civil War ordnance won't have a clue as to what the "lock clevis" is (p. 242) or exactly what and where the two vents, hammer locks, and other parts were.

As for how the gun found its way into Confederate hands, the authors provide several scenarios, all intriguing. They conclude it probably came from the USS *Southfield* and was transported to the Mars Bluff navy yard on the Pee Dee River via a circuitous route, no mean feat for a cannon weighing in excess of 9,000 pounds (pp. 242–245) and another measure of how desperate the Confederates were for artillery.

Christopher Espenshade's chapter covering the battles and battlefields at Blountville, Tennessee and Resaca, Georgia (much in Civil War discussions of late) is especially interesting to me as a re-enactor because we encounter many myths about battles, personnel, and equipment. In the author's words, investigations into these two battlefields "illustrate how archaeologists must deal with myth, local lore, and common knowledge" but also notes that "myths can be perpetrated by archaeologists themselves" (p. 247). Espenshade's study is further example of KOCOA analysis which now seems to be the current standard, or at least one standard, for Civil War battlefield investigation.

The author reviews the battle at Blountville and then addresses three key questions about the battle that "were already answered in the minds of the local populace" (p. 249): the locations of the four Confederate artillery pieces; the route of the Federal cavalry advance; and the location of the Confederate batteries and camps east of Beaver Creek.

The results of this first study provided alternative interpretations to the three key questions: the Confederate artillery was spread across four slight knolls; the Federal cavalry charge did not squeeze through downtown Blountville; and the locations of Confederate batteries and camps east of Beaver Creek have been clarified, though "the revised battle mapping and narrative have not been proven" but are subject to additional field research (p. 254).

Investigation of the Resaca Battlefield used various field methods in 2008 and 2011, especially intensive metal detector surveying. The results can be summed up thus: while relic collectors thought that the site was "hunted-out", the archaeological work recovered significant finds that contributed to an improved understanding of the battle; "valuable data had survived despite decades of relic hunting" (p. 261). Admittedly, relic hunters and archaeologists define "hunted-out" differently (p. 261–262), but "the myth of the 'hunted-out' site can no longer be accepted as accurate", especially when considering a site for listing on the National Register of Historic Places.

During the write-up of this chapter, two new television programs premiered, *Savage Family Diggers* on Spike TV and *Diggers* on the National Geographic network. "Both shows feature teams that use metal detectors to recover artifacts for sale" and Espenshade decries both programs as contributing "little or nothing to issues of meaningful historic preservation or interpretation" (p. 250). In my opinion, *Diggers* is especially egregious because it appears on the National Geographic network, lending it a cachet of legitimacy in the minds of some of the public. National Geographic should be ashamed.

Lawrence Babits' Appendix on METT-T (mission, enemy, terrain, troops available, and time/weather and **KOCOA** (**K**ey terrain; **O**bstacles, **C**over and concealment; **O**bservation and fields of fire; and **A**venues of approach (plus weather) is a must read to understanding the fieldwork strategy for a number of chapters in this volume. He also discusses principles of war from 500 BC to the present (pp. 267–270), and argues that all three will help ensure archaeologists' success in analyzing combat and military formats and "their impact and use on a site" (p. 270).

Professional archaeologists, avocational archaeologists (especially metal detectorists), Civil War historians, and re-enactors can all benefit from careful reading of this volume. It is highly recommended.

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