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Physical Evidence and the Battle of the Little Bighorn: The Question of Interpretation

by Albert Winkler

Among the most essential aspects of historical research is to locate, assess, and interpret primary source materials relating to any past event. This is certainly true of the Battle of the Little Bighorn, and researchers have recently found many artifacts on the battlefield that may add to our knowledge of that event. The process of examining these artifacts was greatly enhanced by the brush fire of August 1983 which destroyed a great deal of the thick vegetation that had long obscured the area. The following archaeological investigations have identified much new direct evidence on the battle. The subsequent books and articles based on these finds have been exciting and very helpful, and many arguments have been advanced on troop dispositions, army movements, the locations of the fighting, and the duration and intensity of the combat.

Then I found a photograph showing Walter Mason Camp and Edward S. Godfrey on the battlefield in the Walter Mason Camp collection at Brigham Young University. The picture’s caption reads, “Gen’l Godfrey and the late W. M. Camp searching rocky ridge near Reno’s Hill for cartridge shells, 1916.” Camp was a tireless researcher on the
Indian Wars of the Far West. His interview notes, correspondence, and the accounts he gathered over decades are among the most important compilations of sources relating to the Little Bighorn. Godfrey fought in the battle at Reno Hill, and he wrote a good account of that engagement. Clearly, one of the most important researchers on the battle, and one of the most significant witnesses to the conflict, removed any spent shell casings they found destroying much evidence as if such artifacts had no value in better understanding the fight.

I then began to question the reliability of much of the physical evidence. I now suggest that certain parameters should be considered before those items can aid in a proper interpretation of what happened. The purpose of this article is to suggest some of these considerations to assure that the conclusions drawn from the artifacts are as valid as possible.

While "more than five thousand battle-related artifacts have been collected, analyzed, reported, and cataloged" on the battlefield, the ones most closely related to the combat help the most in an understanding of what happened. As Douglas D. Scott, an eminent archaeologist on the battle, has stated, "Bullets and cartridge cases were most important in helping us see how the battle was fought." He is quite correct, especially dealing with the cavalry bullets and shell casings.

However, these relics must clearly relate to the encounter, and the location or context of where the artifacts were found must be carefully noted. These items must also represent a significant percentage of the munitions expended in the battle, and these artifacts must be representative of the items that were removed from the area. Therefore, the battlefield should be considered as a crime scene, and all the original evidence should remain as undisturbed as possible. Only by taking these issues into account can researchers be completely sure of the significance of any object found on the battlefield.

On July 11, 1876, only 15 days after the battle, Major Reno reported on the number of rounds used by the army, "Amt. Ammunition exp’d.–Carbine, 38,030 rounds [Amt. Ammunition exp’d.]–Pistol, 2,954 [rounds]." The total amount of rifle and pistol ammunition expended was therefore 40,984. Each round once fired left two artifacts, the bullet and the spent shell casing. This meant that a total of 81,968 such objects should have been on the battlefield. Reno may or may not have included estimates of how many rounds were fired by the non-military men with the Seventh Cavalry including Indian scouts and citizen packers. Also, the Major’s numbers do not include the ammunition expended by Custer’s column because Reno had no way of knowing how many rounds they fired. Therefore, Reno’s numbers were minimal, and the actual total could have been much higher.
Douglas D. Scott, Richard A. Fox, Jr., Melissa A. Connor, and Dick Harmon have published a list of the location of shells and bullets found from the archaeological investigations in the 1980s. The grand total of army spent casings and bullets found at the various areas of the battle is almost exactly 1,108 objects. Yet many more were there at the time of the battle, and an estimate of the number of artifacts originally there helps us to evaluate the significance of these finds.

There were about 600 troopers in the Seventh Cavalry, and they had been issued the standard Springfield Model 1873 carbine. As Major Reno testified, “The men should have 100 rounds of ammunition, 50 on their person and 50 in their saddle bags.” Additionally, each man carried 24 pistol cartridges for his Colt revolver. This meant that these 600 soldiers brought 60,000 rounds of carbine ammunition to the battle and an additional 14,400 pistol cartridges for a total of 74,400. Additionally, as Lieutenant Hare stated, the pack train “had the bulk of the ammunition, 24,000 rounds besides what his men carried.”

Altogether the cavalry brought about 98,400 rounds of ammunition with them to the engagement. Since each cartridge left two artifacts once discharged, they could have produced 196,800 bullets and shell casings. About 50 more armed men were with the Seventh Cavalry including the field staff and band, interpreters, civilian packers, and Indian scouts. Many of these auxiliaries likely used different weapons from the soldiers, but a few of these guns might have been the same as wielded by the troopers, and these weapons could add to the total number of army artifacts. There could have been 200,000 or more army shell casings and bullets on the battlefield. However, the number of expended munitions was clearly much less, and an estimate of how many items were left on the field helps in an understanding of what remained.

The troopers were wielding the Springfield Model 1873 carbine which was capable of a high rate of fire, and it could have left many artifacts very rapidly. When the U.S. Board of Ordnance decided on a new standard army firearm in 1873, they put this weapon through a number of tests including its optimal rate of fire, and the Springfield rifle had impressive results. In a series of five rapid-fire demonstrations, the weapon was fired at the rate of 15.65, 16.82, 19.86, and 15.6 rounds per minute. Even in the hands of five “new soldiers,” these troopers fired the rifle on the average of almost 8.6 rounds per minute. At its highest rate of fire, the weapon could discharge 100 rounds of ammunition within 5 minutes. At its slowest rate, the rifle could fire 100 rounds in just over 11.63 minutes.

The first group of cavalrmen to combat their adversaries were the 130 men in Major Reno’s battalion who crossed the Little Bighorn
River and engaged in the valley fight. These troopers carried 16,120 rounds of carbine and pistol ammunition on their persons and in their saddle bags representing 32,240 bullets and shell casings.

Many participants stated that the men used much ammunition in the valley fight. Lieutenant George D. Wallace said that the men fired “very frequently. The difficulty was to prevent them firing too much.” “I remained on the picket line until the ammunition was getting exhausted.” The scout, Frederick F. Girard, stated, “I should say between thirty and forty rounds [were fired] to a man . . . engaged.”

Captain Myles Moylan said that his men “had fired 40 or 50 rounds apiece while dismounted.” Moylan added that the men “had not sufficient ammunition” to resist the Indians if they had attacked the troopers when they had retreated to the trees. Moylan concluded, “I think my men had fired nearly all of their fifty rounds before leaving the skirmish line.”

Lieutenant Luther R. Hare gave similar numbers. “The men’s firing was continuous from the time they dismounted till they left the timber; they probably expended 40 rounds per man.” Hare said that the men had so little ammunition left that if the warriors, “had charged on him the command could not have stood it but a few minutes.” Sergeant Ferdinand A. Culbertson stated that, “I have had men tell me that they fired 60 rounds.”

Lt. Hare also added that ammunition had to be brought to Reno’s men when they retreated to the top of Reno Hill. “As soon as Benteen joined [us], Reno ordered me to go and find out where the [ammunition] packs were and get them up as soon as possible.” Sergeant Ryan stated that “our ammunition was nearly exhausted” when they retreated to Reno Hill. Lieutenant Godfrey agreed, “When they got to the top of the hill many were clamoring because they were nearly out of ammunition, and Benteen’s troops had to divide” cartridges with them. Lt. Wallace affirmed, “We were out of ammunition.” “I saw one box brought up, the lid was fastened on with screws. Some one called for an axe, and the box was split open about half way, and the men came up and helped themselves to what they wanted till it was all gone.”

If the statements by Girard, Hare, and Moylan are correct then each man fired from 30 to 50 rounds in the valley fight. This meant that the 130 men engaged would have shot between 3,900 and 6,500 rounds of ammunition, leaving between 7,800 and 13,000 bullets and spent casings on the field of battle before Reno’s men retreated to the top of Reno hill. Unfortunately, very few artifacts have been found in the location of the valley fight.

When Reno’s men retreated up the hill, they were met by Benteen’s battalion and the men with the pack train. At that point, there
were about 350 soldiers defending the hill. These troopers initially had 43,400 rounds of carbine and pistol ammunition. Adding the 24,000 rounds brought with the pack train and subtracting the rounds fired in the valley fight, then 60,9000 to 63,500 rounds of ammunition would have been available for the hill fight, and this number of rounds could have left from 121,800 to 127,000 spent casings and bullets.

The troopers on Reno Hill expended much ammunition at times. Lt. Edgerly stated, "We had hardly got back on the hill when the heavy firing commenced, and we returned it, firing volleys and lying flat." Edgerly also recalled that there was heavy firing on the second day. "The rest of the command was doing some pretty heavy firing—most of them. . . . The firing that day began at daybreak and lasted till ten or ten thirty o'clock."\(^{17}\) Lt. Godfrey stated, "When my company was first put out the firing was pretty heavy. . . . The heavy firing was on the part of the command principally." "Gibson's men [Company H] had expended nearly all their ammunition, some men being reduced to as few as four or five cartridges."\(^{18}\)

Captain Thomas M. McDougall was an experienced soldier who saw action in the Civil War, and he put the fighting in perspective. "Very heavy fighting commenced and we fought till about 9 o'clock [June 25]: the heaviest kind of fighting. . . . The engagement began [again] about 2:30 the next morning [June 26], being very heavy" for over 10 hours.\(^{19}\) Capt. Myles Moylan agreed, "We had been there but a short time when the action commenced—very heavy all along the line. It continued until after dark and opened again about 3 a.m., and continued till mid-afternoon of the 26th."\(^{20}\)

Using Reno's estimate that his command had fired 40,984 rounds in the entire battle, and subtracting those used by his battalion in the valley fight, then the action on Reno Hill, used from 34,484 to 37,084 rounds of ammunition. That left from 68,968 to 74,168 bullets and shell casings on the field, but only 305 spent shell casings and 530 bullets for a total of 835 such objects were found by modern researchers in the area.\(^{21}\)

The amount of ammunition Custer's column expended is difficult to assess, but some observations may be made on the intensity and duration of the fight from the available evidence, including the din of battle. Of course, there is no way of knowing from the sound who was firing a weapon. However, the cavalry had been trained in fire coordination, and the sound of volleys more likely came from the troopers firing their weapons in unison than by the Indians who were not trained to fire in salvos.

Kill Eagle gave an interview on the topic. "He described the firing at this point as simply terrific, and illustrated its force by clap-
ping his hands together with great rapidity and regularity. Then the movement of his hands gradually slackened and gradually grew more feeble."22 The men on Reno hill also heard the firing. Frederick F. Girard stated, "I heard continuous firing clear on down as if there was a general engagement, down to where I afterwards went to Gen. Custer’s battlefield. And I heard firing to the left of the village; 3 or 4 volleys as if there were 50 or 100 guns at a volley."23 Lt. Varnum added, "I heard firing away down the stream. . . . It was . . . a heavy fire—a sort of crash—crash—I heard it only for a few minutes. . . . I thought he [Custer] was having a warm time down there." Lt. Luther Hare asserted, "I heard two distinct volleys." Lt. Charles DeRudio testified, "I could hear immense volleys on the other side of the village down the river. The fire lasted probably an hour and a half and then died off at a distance."24

Private Edward Davern said, "I heard volley firing from down stream. . . . No shots between the volleys." Lt. Edgerly testified, "The only firing I heard was the 5 or 6 volleys. I judge . . . it lasted an hour and a half." B.F. Churchill, a citizen packer, stated, "I heard it [firing] down the river. . . . I heard four or five volleys. . . . It lasted one and a half to two hours."25 Captain McDougall testified, "The firing I heard . . . was . . . just 2 volleys." George Herendeen stated, "I heard firing. It began in volleys. I heard a great many volleys and between them, and after they had ceased, scattering shots. . . . It lasted about an hour."26 Sgt. Ferdinand A. Culbertson stated, "We heard firing from down below. At first it was a couple of volleys, very heavy. Afterwards it was lighter and appeared more distant." Captain Benteen testified, "It is my judgment that this fight lasted from fifteen minutes to half an hour or an hour; not more than the latter."27 The majority of the evidence from the sound of volleys indicate that Custer’s men fought for one and a half to two hours, and they could have fired many volleys and expended much ammunition.

A few Indians reported that the 210 men with Custer expended much ammunition, while others did not. Curley, the Crow Scout with Custer, gave an interview and reported that “the troops held their position firmly, and delivered a heavy fire, and every time drove them [the warriors] back. Curley says the firing was more rapid than anything he had ever conceived of, being a continuous roll, like, ‘the snapping of the threads in the tearing of a blanket.’ The troops expended all the ammunition in the belts, and then sought their horses for the reserve ammunition carried in their saddle pockets. As long as their ammunition held out, the troops, though losing considerable in the fight, maintained their position in spite of all the efforts of the Sioux. From the weakening of their fire towards the close of the afternoon the Indians appeared to believe that their ammunition was
about exhausted, then made a grand final charge.” Chief Gall agreed, “The soldiers ran out of ammunition early in the day. Their supply of cartridges was in the saddle-pockets of their stampeded horses.” . . . “They [the troopers] shot away all they had. The horses ran away, carrying in the saddle pockets a heap more. The soldiers threw their guns aside and fought with the little guns. [pistols]” 28 Other Indian accounts state that Custer’s men used little ammunition. Red Horse reported, “The troops used very few of their cartridges. I took a gun and a couple of belts off two dead men. Out of one belt two cartridges were gone; out of the other, five. It was with the captured ammunition and arms that we fought the other body of troops.” Left Hand described taking a soldier’s gun, and “I went back and took his belt, which had many cartridges in it.” 29

Custer’s battalion brought about 26,000 rounds of carbine and pistol ammunition to the battle, and I suggest that 25 rounds is a reasonable estimate of the average number of cartridges fired by each trooper for a total of 5,000 rounds discharged. As the tests of the rifle indicate, “new soldiers” could have fired that many shots in three minutes. This would have left 10,000 bullets and shell casings on the field. From the sound of the engagement, the men probably fought from one to two hours, and they had plenty of time to fire that many rounds. If the figure of 5,000 was added to the 40,984 fired by Reno and Benteen’s men, then the cavalry fired 45,984 rounds of ammunition in all parts of the battle, leaving about 91,968 bullets and shell casings. Yet far fewer than 91,968 such artifacts were found in recent excavations, and some of these objects could be misleading because the battlefield could have been contaminated with items that appear to have been part of the fight but actually had little to do with it. Lieutenant Godfrey thought that some of the firing he heard was not directly related to the actual battle. “We heard two distinct volleys . . . I have but little doubt now that these volleys were fired by Custer’s orders as signals of distress and to indicate where he was.” 30

Some of the artifacts could be misleading because a number of the troopers may have fired their weapons at themselves. Wooden Leg reported that many of the soldiers in Custer’s battalion “went crazy. Instead of shooting us, they turned their guns upon themselves. Almost before we could get to them, every one of them was dead. They killed themselves.” He added, “About this time, all of this band of soldiers went crazy and fired their guns at each other’s heads and breasts or at their own heads and breasts.” 31 Likely, these soldiers panicked probably remembering the warning to save the last bullet for themselves to avoid being captured and tortured. Their actions might also indicate the soldiers had already fired nearly all of their ammunition.
Another issue is the question of who was actually firing the cavalry’s weapons because the warriors retrieved carbines and pistols from the men in Reno’s valley fight and from Custer’s column. In a letter dated July 24, 1876, Captain J. S. Poland wrote, “They [the Indians] report ... that in the three (3) fights they have had with the whites they have captured over 400 stand of arms—carbines and rifles (revolvers not counted).” These three engagements were likely the Battles of Powder River, the Rosebud, and the Little Bighorn. Captain Poland added, “A report from another source says the Indians obtained from Custer’s command 592 carbines and revolvers.”

After the destruction of Custer’s battalion at the Little Bighorn, the Indians probably recovered over 200 army carbines and over 200 pistols as well as the remaining ammunition. As Sergeant Ryan stated, “The Indians got all their Springfield .45 caliber breech loading carbines, and in addition to getting what cartridges the men had left in their waist belts, they probably got the 60 [50] extra rounds that each man carried in his saddle bag, also the 24 rounds of pistol ammunition.” Ryan added, “All this ammunition with the carbines was used against Reno’s men by the Indians, as a number of our men were wounded with the same caliber ammunition.” The sergeant also stated that a warrior nearly killed him with a shot fired from a calvary carbine. “I had a rifle ball put into the right side of the pommel of my saddle, which went through my blouse and part of my pants, and nearly took the wind out of me. It was a .45 caliber ball fired from the Indians supposed to be some of Custer’s ammunition.” Lieutenant Varnum also believed that the Indians used Custer’s guns against the men on Reno Hill. “Personally I think and always have that the best guns in the hands of the Indians, were the carbines taken from Custer’s men.” Apparently, Varnum thought that he could tell the difference in the sound made by army rounds. “On the hill most of the bullets came in with a zip sound. When a zing-g-g sound came, that made you take notice.”

Wooden Leg reported taking two carbines from Reno’s men, and he also found forty cartridges in a trooper’s saddle bags. He stated that “in all of the belts taken from the dead men there were cartridges. Some belts had only a few left in them. In others the loops still contained many, and occasional one almost full. I did not see nor hear of any belt entirely emptied of its cartridges.” “The Indians took the guns of these soldiers and used them for shooting at the soldiers on the high ridge [Reno Hill].” Mrs. Spotted Horn Bull reported that the Indians got guns from the soldiers in the valley fight, “When they began to run away they ran very fast, and dropped their guns and ammunition.” “Our people, boys and all, had plenty of guns and ammunition to kill the new soldiers. Those who ran away left them behind.”

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"The Indians fought the soldiers with bullets taken from the first party that attacked the village."37

In referring to Custer’s Battalion, Red Horse stated, “The troops used very few of their cartridges. I took a gun and a couple of belts off two dead men. Out of one belt two cartridges were gone; out of the other, five. It was with the captured ammunition and arms that we fought the other body of troops [on Reno Hill].” “These different soldiers discharged their guns but little. I took a gun and two belts off two dead soldiers; out of one belt two cartridges were gone, out of the other five. The Sioux took the guns and cartridges off the dead soldiers and went to the hill [Reno Hill] on which the soldiers were, surrounded and fought them with the guns and cartridges of the dead soldiers.”38

The Indians could have done some shooting with the captured cavalry rifles after the battle, and any resulting artifacts could be very confusing. When Lieutenant Edgerly advanced to Weir point, he could see Indians shooting bodies on the ground. “When I went out with the troop, on the afternoon of the 25th, I could see quite a number of Indians, galloping back and forth on the battlefield, where we afterwards found the bodies [of Custer’s men], and firing at objects on the ground.”39 Indian accounts agree that the warriors shot the bodies of dead soldiers. Spotted Horn Bull’s wife stated, “The boys of the village shot many who were already dead.”40 Chief Gall added, “When the skirmishers reached a high point overlooking Custer’s field, the Indians were galloping around and over the wounded, dying, and the dead, popping bullets and arrows into them.”41 The Indians could have left other artifacts that are also potentially confusing because they often shot ammunition not in the battle, but in an act of triumph. As Lt. Edgerly added, “It is the custom of Indians to do a great deal of firing to celebrate a successful fight.”42

Accounts differ as to the numbers of shell casings left in the area of the destruction of Custer’s column. Lt. Edward Maguire reported, “Near point “B” [Medicine Tail Coulee?] there were empty shells and marks of ponies and horses, and as we advanced we found bodies and more shells on the crest of the hill. . . . We found Government and Winchester shells and one peculiar brass shell supposed to belong to Gen. Custer’s pistol.”43 Captain Moylan stated, “Calhoun’s company was killed in regular position of skirmishers. I counted 28 cartridge shells around one man, and between the intervals shells were scattered.”44

Lieutenant Godfrey testified, “Where the bodies lay I found many .45 caliber [carbine] cartridge shells.”45 Sergeant Ryan stated, “Strange to say, none of the saddle or horse equipments, not even a strap that I could see, nor cartridge shells, could be found on the
field except five or six shells that were found under General Custer's body. Lt. Godfrey made a statement about one of the dead troopers, Sergeant Butler, "The Indications were that he had sold his life dearly, for near and under him were found many empty cartridge shells." Lt. George Wallace stated, "At one or two places I saw little piles of cartridge shells, twenty-five or thirty. This was near where Calhoun was killed. Very few elsewhere." Lt. Hare asserted, "The only evidences [of the fight] we could find were dead men. I saw no cartridge shells of ours." Some soldiers said they saw many shells while others saw but few. But the recent excavations have not found the cartridge shells the men did see. A reason why the soldiers apparently found so few shells on the battlefield could have been because the Indians had already removed them.

The Indians took anything of value, including spent cartridge casings. Lt. Charles DeRudio stated, "I saw only a few cartridge shells [on the battlefield]. I am informed that the Indians pick them up." Reportedly, the Indians took the shells to reload them for future use. The historian, John S. Gray, believes that "the Indians [at the Little Bighorn] stripped the soldier's bodies of clothing, arms, and ammunition, and as they customarily reloaded empty shell cases for their own use, they gathered up many of these, too." Another historian, John D. McDermott, explains, "The tribes found willing sellers among Indian traders and mixed-blood gun runners from Canada. They too traded with emigrants along the major travel routes, acquiring not only weapons but powder, lead, primers, and equipment for reloading cartridges that they carried with them as prized possessions. In time the Indians became experts at remolding miniballs and reloading shells."

Indian sources affirm that they took shells. John Stands in Timber stated that the Indians often watched soldiers taking target practice, and "the Indians used to go over there and pick up a lot of .45-70 lead and reload shells." Colonel Richard Irving Dodge, who saw action in the Indian Wars, stated, "Powder and lead can always be obtained from the traders: or, in default of these, cartridges of other calibre are broken up, and the materials used in reloading his shells. Indians say that the shells thus reloaded are nearly as good as the original cartridges, and that the shells are frequently reloaded forty or fifty times."

A reporter of the Chicago Inter-Ocean newspaper stated on Aug. 19, 1876 that "many empty shells ready for reloading" were found with an Indian corpse. Captain David Johnston Craigie stated that in 1869 or 1870 he met an Indian who had picked up "some empty shells left at the target range," and "This Indian had quite a number of these reloaded shells with him." The Indian gave the captain a detailed description of how he reloaded the shells with the aid of simple
tools. The Indians likely took shell casings from the places where they were most readily available, which included any piles of casings left on the field where they had been fired. Additionally, the Indians likely took the spent casings from areas near the bodies of the soldiers because the Indians were mutilating and plundering the dead anyway, and the spent casings nearby could be easily retrieved.

The army also had no interest in preserving the battlefield, and the soldiers destroyed many objects after the fight. As Sergeant Ryan stated, “We took all the extra guns belonging to the dead and wounded, broke the stocks of them, and built a fire and threw them in.” Lt. Godfrey added, “During the rest of the day [June 27] we were busy collecting our effects and destroying surplus property.” Also, hundreds of survivors from the Seventh Cavalry and troopers with General Terry’s command were free to comb the area and remove almost anything of interest, and the soldiers were under orders to take any spent shell casings from the area.

General Order 13, issued on February 16, 1876, stated: “It appears from reports of officers serving on the plains as well as from experiments conducted by the Ordnance Department, that empty metallic cartridge shells for the Springfield carbine and musket can, after being fired, be used an indefinite number of times by refilling and capping. Great care will therefore be exercised by all officers to prevent
Indians from procuring the empty shells thrown away by the troops after firing, either in action or at target practice.58

This plundering of the battlefield was only the onset of a lengthy process. Tourists came to the area starting in 1877 which began the stream of visitors that continues to this day. As Don Rickey, Jr. has observed, "Many of the early visitors to the Custer Battlefield were avid relic hunters. Thousands of cartridge cases, many relics from the Indian village site and Battlefield proper, and even human bones were taken away as mementoes of visits to the Battlefield."59 Souvenir hunters most likely looked for artifacts at the most famous sites related to the battle or at places where they had the easiest access. The road that follows Calhoun Hill was a convenient place to look for artifacts. Last Stand Hill was also easily accessible, and it was the most famous location on the battlefield. Reno Hill was also a well-known position. Apparently, Last Stand Hill suffered the most losses in artifacts, and surprisingly few relics have been found there.

Another problem is the contamination of the location by artifacts that can be confused with those left during the battle. Soldiers frequently visited the area especially when Fort Custer, only about fourteen miles away, was in operation from 1877 to 1897 and "Picnicking at the Battlefield was a proper diversion for Army personnel stationed there."60 The historian, John S. Du Mont, has commented, "Cavalry
exercises were held on the battlefield once Fort Custer was established nearby, in 1877, and live firing was employed. Also hunters and Indians roamed the area for many years, and this alone would preclude all empty cartridge cases being of the 1876 variety. 61 In 1886, troopers came to the battlefield to reenact part of the combat. Some of the men were arrayed in skirmish lines, and they fired volleys, likely leaving bullets and spent casings. The photographer, David F. Barry, took pictures of these men shortly after they had discharged their weapons. 62 In October and November 1887 some troopers were sent to the nearby Crow Agency to restore and maintain order. They camped on or near the battlefield and fought a brief skirmish with the Indians, probably leaving many artifacts in the process. 63

In conclusion, I estimate that upwards of 91,968 bullets and spent shell casings from the army could have been originally on the battlefield because of the fight. But the location of only 1,108 or a little more than 1% is known with certainty. Furthermore, there is no way of knowing if some of these objects supposedly related to the battle were actually left there as part of the engagement or were introduced later.

I also wonder if such a small percentage is statistically significant. This small percentage would only be important if it were a representative sample similar to the data used by modern political pollsters who can derive much by a small sample. To make valid conclusions, modern pollsters must get their information from a truly random sample to validate their conclusions, and I seriously doubt that the artifacts found on the battlefield fit that parameter. Rather, the removal of artifacts was done in such a haphazard manner that the objects which remain could hardly be representative of what was taken. This means that a sampling error may be involved.

I do not wish to suggest a complete repudiation of the data presented by the available bullets and shell casings found on the battlefield, but I believe that all such evidence should be interpreted with the possible limitations of that information in mind.

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56 Ryan, 302
57 Godfrey in Graham, 146
58 G.O. No. 13 Washington, February 16, 1876. Army and Navy Journal, vol. 13 (February 26, 1876): 29, 1. It further states, “No Special Orders were issued from the Adjutant General’s Office on the following dates: Wednesday, Feb. 16; Friday, Feb. 18; and Tuesday, Feb. 22, 1876.”
Albert Winkler

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