



SO WHAT - WHO CARES?

By William Rose

In the winter of 2011, a meeting was held with the Superintendent of Minute Man National Historical Park, near Concord, Mass. The Park had recently completed a dig at the James Barrett House in the course of restoration of the home that General Gage had ordered searched by a large Crown force for military stores; this is the impetus for the events of 19 April 1775. The archaeological effort centered on excavating the privy and the well. No effort was undertaken to try to discover any evidence of military action related to 19 April. Primary documentation is dishearteningly thin for these events and this was equally true for Barrett's farm. This seemed a wasted opportunity to try to flesh out, with real ground truthing data, the events surrounding Gage's mission on 18/19 April 1775.

During the course of the meeting, it was discussed that there had been no primary archaeological effort within the Northeast Region for 20 years. Primary, meaning was there a compelling historical question that may be answered by organizing a significant intellectual and physical effort to uncover buried historically meaningful information?

Plenty of defensive archaeological efforts were and had taken place. Defensive meaning that a road or some structure or infrastructure object was to be fabricated on archaeological sensitive ground. The area needed to be cleared of cultural information before work could start. No attempt to investigate the area for new information was undertaken.

Minute Man National Historical Park spans three towns, Concord, Lincoln and Lexington. Little in the way of civic engagement occurred with the Park and the town of Lexington for a variety of reasons. A significant one is that the Town owns Lexington Green, an iconic site known around the world. However, it is not a part of the National Park system. As a result, the Town and the National Park do not share their research and interpretive activities as well as might be hoped. Another reason is that the portion of Lexington in the National Park is quite small so resource allocation is commensurately reduced.

Captain Parker's stand against the Crown Forces with the town militia on or about 0600 on Wednesday morning 19 April 1775 remains etched in the national memory. Eight men are killed and 10 wounded in 15 minutes of extreme chaos. Who fired first; whose fault was it; was it a massacre; was it planned? These questions are as fresh today as they would have been 243 years ago and many have written about them.

A valid question at the time of the meeting was how to involve the community of Lexington, and common citizens in general, in understanding and participating in the vibrant historical record of the area. Archaeology offers an opportunity to produce physical evidence of the historical record as well as a way to excite the public to participate in and accept the consequences of their history.

Captain Parker's behavior on that day has been discussed and analyzed in considerable detail. However, it is not clear that much investigation was done as to his leadership skills, tenacity, bravery, patriotism or what you will, hours after the fight on the Green. He marched west to meet the Crown forces on their return. He willingly marched into harm's way again. After sustaining casualties approaching 15% of the adult male population of the town, he volunteers to do it again. How many of us would do that?

It was proposed during the meeting that we might try a dig at what the Victorian Age labeled Parker's Revenge. At the time there was an accepted site for the action but there was no primary data to support that site or any other location for that matter. The general area was most likely accurate but no one knew where Parker encountered the Crown column on its return. The professional archaeologists nixed that in the bud saying that there needs to be a compelling question that archaeology and only archaeology can answer to galvanize the institutional mind to action. The local people gave them one:

Can archaeology define the site and then describe the tactics that Parker exploited in his resistance to the Crown column on its return from Concord?

The Regional archaeologists and National Park management thought that this idea had some legs. The local people were prepared to make those legs even stronger. They described how with the discovery of many little bits of data we can help to flesh out the big picture of the fight on 19 April. After all, the pathway through the park is called Battle Road but there is virtually no information on precisely where on the road the battles took place! The Park Superintendent and the Northeast region of the National Park Service (NPS) agreed to sponsor the Project.....to become known as the Parker's Revenge Archaeological Project (PRAP). The civilian attendees immediately promised \$10,000. The Park engaged their Friends of Minuteman National Park organization to raise additional funds, hire and pay for professional archaeologists and help to manage the project. A full report on the project describes the project in detail and provides citations for references used in this manuscript.¹

WHAT DID WE DO???

Now with an official project in hand, it's time for performance. No one outside of the Northeast Region archaeological staff had ever done this before. We decided that there was a real opportunity to do something not done in at least 20 years and maybe never before within federal land. We decided that this project needed to be a cooperative among the community, the National Park and necessary outside historians and information sources wherever they may be found. Here is a descriptive list of the folks who joined the PRAP. As in virtually everything in this document, please refer to the NPS report on the Project:

Principal Investigator	1
The Living History Community	~50 people
Professional Archaeologists	4
Outside Archaeological Oversight Firm	8
Park Rangers & Staff	6
Northeast Region Staff	4
University Staff Advisors & Courses	5
Friends of Minuteman National Park	6
Fund Raisers from around the country	Several
People willing to lend their sweat	Bunches

One can infer from this assemblage of folks that this was not a parochial effort. We explicitly designed a team from every possible source that could add value. To be sure, this list is not exhaustive....we have historians, veterans, material culture specialists, geologists, topographical experts, geophysical experts, historical landscape analysts, animal husbandry practitioners, archaeologists, weapons specialists and interested citizens. To some extent the question of who cares is being answered. It seems that this effort was able to generate large local area community interest, but also to attract people from as far away as Colorado. The project was taking on the attributes of a truly grass roots effort.



Figure 1. Group photo of study team.

Preparing to dig

With the team in place (Figure 1) and with consideration that with any investigation, you had better be ready for a surprise or two, the team structured the approach required for such a special project. We needed to understand the archaeological constraints of the site. There were nearly 240 years of human change wrought on the landscape. We needed to understand that and factor it into what we could do on the ground. That led into a discussion of what technology we would employ to extract the most information with the least effort and impact on the site in order to protect it for future efforts when technology might be superior to what we currently have.

An overarching consideration, of course, is the testament of history itself. The historical record is colorful but frustratingly sketchy. At the time of the battle, the participants were more interested in preserving their possessions and lives than helping us out with exhaustive documentation on who did what to whom and where. There were deeds and 19th century propaganda histories, depositions of British officers and the same from Colonial

participants but none of this information actually helped to pinpoint the site of Parker's second confrontation with Crown forces on 19 April.

In order to aid in minimizing the work needed to find and describe the action on 19 April, the team relied on a military technique used for battle/conflict analysis. This is KOCOA. Using this framework one is able to both eliminate or confirm that the land features support a particular hypothesis of what happened.

Here is the structure:

- K Key terrain
- O Observation and fields of fire
- C Concealment and cover
- O Obstacles
- A Avenues of approach and egress

It would be tedious to map every feature on the site with its corresponding KOCOA item in this paper, so instead we'll try to highlight the most important connections with the formula. Please keep in mind that his method was key to managing our entire project. Finally, with actual ground work completed, we need to have a proper system of preservation and interpretation of any artifacts retrieved. This work was frustratingly slow and, in fact, continues to this day.

Analyzing the historical record

"About the middle of the forenoon, Captain Parker, having collected part of this company, marched them towards Concord, I being with them. We met the regulars in the bounds of Lincoln, about noon, retreating towards Boston. We fired on them, and continued so to do until they met their reinforcements in Lexington."²

There you have it. This is the COMPLETE written historical record of the event and, moreover, this was recorded by a participant 50 years after the event!



Figure 2. Site of Tabatha Nelson's house.

To be sure, there are other bits of information that help paint the picture of what may have happened on that day. Most of them are land records describing cultural and physical features that fit into our KOCOA framework. We have the original Battle Road to walk. We now know where Tabatha Nelson's house was (A, K, O and C; important pieces of information; Figure 2). Tabitha Nelson's house proximity makes it an Obstacle, Key terrain, an Observation and field of fire site and a place for Cover and concealment. By taking these factors into account it can help us to understand how the British column would behave. Moreover, it might point us to



Figure 3. Parker's revenge painting by Don Troiani.

the site where a fire might have occurred. This is how effective the KOCOA system can be. (It is amazingly descriptive when used.) Deeds tell us she owned a barn but we have not been able to find a trace of it in the modern landscape. There was an 18th century water feature, a stream, and it is still there today. There was a bridge near to where the road turns in front of Tabitha's house. This too is no longer there and we have not been able to find it. There is a significant 20 foot high granite outcropping right where the road straightens from its turn and its only 30 feet from the roadway. There are vestiges of an 18th century path that cuts through one side of the suspected battle site. There are two references to a boulder-strewn field, but there is no such field present today. It is left to the reader to see where all these prior bits fit into the KOCOA structure.

What is there today is a road built during World War II to create a gate to Hanscom Air Force Base. Unfortunately, it cuts right through the site. It appears that one side of the modern road provided the construction material for building the road. That destroys any topographical information. On the other hand, the other side of the road appears to be relatively intact. While we can surely regret the actions of the government in changing a historical landscape, there is plenty of blame to go around.....at least two private homes with associated driveways and gardens and out buildings were built in the 20th century right in the middle of our area of

investigation. One should not forget that this was farmland from the early part of the 17th century and there is debris from close to 400 years of land use. We have found some impressive trash pits and dumps on the site.

We are analyzing a battle so it does require us to understand the tactics of the period that would have been used in the situation we think we are presented.

General Gage sent out a column of infantry to destroy military stores in the town of Concord. There were some attached artillerymen charged with rendering unusable any cannon they might find, but no cannon were used in this part of the fight. The infantry was comprised of companies of grenadiers and light infantry, the shock troops and the skirmishers. The light infantry's agile men protecting the flanks of the marching main column. The companies of men were from various regiments whose officers, let alone the men, had not trained for this kind of combined force. In fact, some officers were from regiments not even on the field that day. An already shaky chain of command was further compounded by high degree of being unfamiliar to one another. The light infantry were charged with protecting the flanks of the column. They would run out at 90 degrees to the axis of march to push attackers away from the road. The situation presented on this day on this spot was not conducive to success for the Crown forces. They had fired on the Colonials on Lexington Green and inflicted 18 casualties. They

finished their march to Concord and had logged 19 miles on foot by the time the fight at the North Bridge took place at about 0900. Now they had to march back and one could assume that the country people were not exactly pleased with their behavior.

At least 20,000 Colonials mustered and marched on this day and about 6,000 actually came into contact to fire on the column. Think about being six or so miles from the North Bridge. You have been in contact since Merriam's corner about five miles to the west. Officers and sergeants have been killed and wounded. You have wounded to tend to and to take back to Boston. The column has stolen carriages to carry the wounded and ammunition is running desperately low. Officer's horses are dead or being used to carry wounded men so their use in helping to communicate to the stretched out column is compromised. You can't surrender to the Colonials for pride's sake but also because you don't know who to surrender to. There was no unified command for the Colonial forces. No one person directed the actions of the various towns. If you surrender to Action, the Lincoln men would probably still be attacking you and so on. Given this lack of structure for the Provincials, your only choice as a British regular was to fight all the way back to Boston (Figure 3) or desert.

The light infantry was not only marching the 19 miles back to Boston, they were also running back and forth from the road to confront the Provincials and thence back to the column. These men were facing up to 40 miles of marching and fighting in about 18 hours. The toll on the mind and body must have been staggering. The grenadier companies were mostly self-confined to the road and made up the body of men fighting the van and rear actions. No regular was in a safe position on that march. There was essentially a 360 degree fight going on. And how experienced were these men?

The average age of a British regular was 36. Not the 18 year old youth full of energy and innocent of the world. These men had been in the army awhile but that does not mean they had experience fighting. The last conflicts for the King's army had been over since 1763. There were police actions in Ireland and the odd show of force in various colonies around the world but combat of the sort seen on 19 April was not the norm for the men on the march. Most British officers were much younger than their men and had never seen action at all.

Were the Colonials any better prepared? Maybe yes, maybe no. There were clearly veterans from the French and Indian wars on the field. The Colonial militia had to drill 4 times a year minimum, not too taxing, and the minute companies drilled 2 or 3 times a week and were more able to exercise their military skills including marksmanship. The Colonial forces were as young as 16 and as old as 79 per the documentation we have from the participants. They were fighting on and for their own land. They knew the KOCO setting far better than the Crown forces did, especially when fighting in their owntown.

Is it hopeless?

So, are we condemned to chase phantoms around the bounds of Lincoln? There is so little primary documentation and many features we know were there then are now gone. And stuff we never wanted there is right in the middle of our KOCO analysis. As previously hinted, technology can help save our effort. The list of things available to us was quite impressive, and refer again to the NPS report¹ for details, but the following will give a flavor of what

we did to prepare for the actual task of investigating the ground for evidence.

The earth is a pretty cool thing and the laws of physics compel certain attributes of the ground to be accessible if one knows how to look. Dirt, for lack of a better all-encompassing name, doesn't just sit there. It interacts with the dirt around it. It interacts with earth's magnetic field and it remembers. With exotic names like Ground Penetrating Radar (Figure 4), Proton Magnetometry, Conductivity/Magnetic Susceptibility, the team attempted to find cultural, i.e. man made, structural remnants that were no longer visible to the eye.

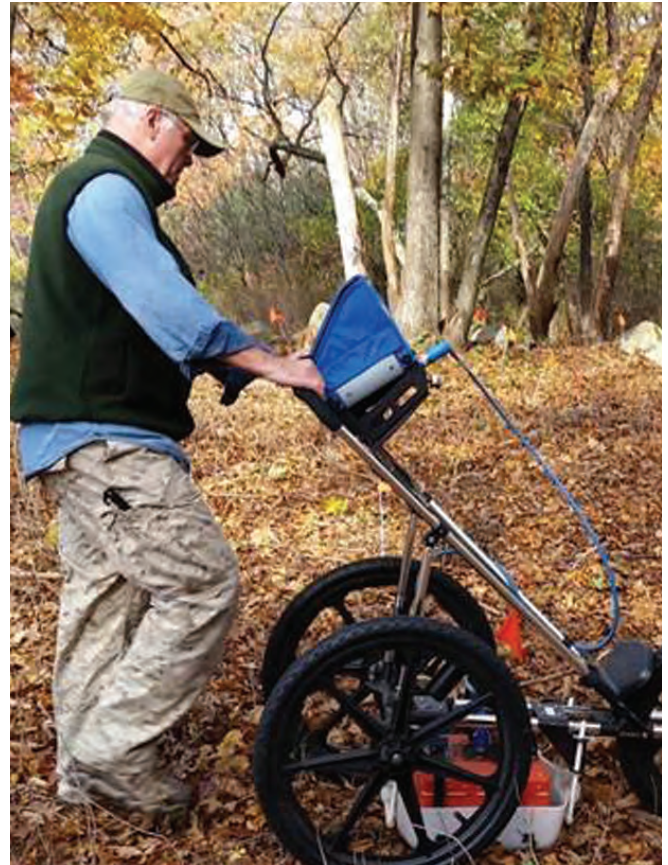


Figure 4. Use of ground penetrating radar.

Ground Penetrating Radar sends a radio wave into the earth, dirt. Those radio frequency waves are reflected and refracted by subsurface anomalies. Those anomalies may be natural features set down eons ago or they may be recent, as earth time goes, perturbations by man. The return waves are captured and analyzed and a readable graphic representation is produced. Once presented to the skilled user, an interpretation of what is in the dirt can be made. You can see cellar holes, pits, barn foundations and the like.

Magnetometry looks at the magnetic field of the earth. When you were a kid you dumped iron filings on a plate and then put a magnet in them and you got this weird looking pattern of radiating lines from the poles of the magnet. Well, that's the same principle here. But what happens when man interjects a feature into the dirt? It deforms the magnetic lines of flux. If we send a signal that asks the dirt to tell us what the lines look like in any particular spot we can analyze that data to see what changes have been made.

Those same experiments you did as a kid also included making a magnet out of iron, like a nail. Objects of metal, particularly iron,

mess with the magnetic field of the earth and even if the object decays or rusts away it leaves a fingerprint or remnant of its own field in the dirt. That remnant can be detected by the magnetometer. So, think of a cannon buried in the dirt. You can't see it but a magnetometer will because the earth's magnetic field has been disturbed by the presence of a big hunk of iron and we can detect that disturbance. Fire will also drastically affect the lines of flux for the earth in the area of the fire, so looking for hearths in house sites is particularly easy with a magnetometer.

Now for Conductivity and Susceptibility. The first involves an electrical property (a current) that one can induce by moving a magnet near a piece of metal. If you fire an electromagnetic pulse into the dirt it will interact with metal objects to produce little eddy currents that can be detected. These currents are directly proportional to the dirt and objects ability to conduct electrical energy. The susceptibility part of this measures the dirt's or an object's ability to be susceptible to magnetizing. This is highly useful for finding metal objects and then discerning the likelihood that they are iron, which is highly susceptible.

The final tool that does not have an exotic name but proved to be the most useful tool we had was the metal detector. You have seen them on TV and they are quite easy to use and with enough practice and skill the data they produce is highly useful. The metal detector once again sends an electromagnetic wave, usually several of different frequencies, into the ground and measures the distortion to the waves it gets back. Eddy current and magnetic field distortion are read back and converted into sound and visual data.

These tools are very locality specific. A person walks the ground asking the dirt questions. There are other tools that are a little more macro, but offer more help in finding the old stuff and eliminating the new stuff.

Aerial photography begins to help us from the 1920s onward. We used a host of aerial survey maps to understand the effect of Hanscom Air Force Base and to see the building of various 20th century structures and homes including the Visitor Center at Battle Road. We also used LIDAR, an airborne laser, that can cut through vegetation and even some dirt to reveal subsurface features. We were able to map the entire area with a surface panoramic laser. This data provided us with a topographical map from which we could remove a tree, add a tree, move around the battle site and reveal different viewing angles depending on position. We could basically recreate the way the site looked on 19 April from a vegetation and topographical point of view.

Finally, through brute force we mapped with modern GPS antennas, every significant rock, nook and cranny in order to have a complete geophysical description of what the site is today.

We are getting close to going into the dirt.

It is not fair to say that nothing was known about the site's 19 April archaeology. There were digs done in the late 20th century. Tabitha Nelson's house foundations were discovered, but their locations were not recorded well enough to identify them today.

As a result of 9-11, Hanscom Air Force Base was required to update its security in the area of the gate at Airport Road. In the course of doing this, a few good things occurred. One: a fence was removed and re-sited. The land no longer enclosed was given to the Park, thus enlarging the boundaries of the area we were interested in. Debris from removing the fence became a digging night-

mare but.....Two: In the course of putting up the new fencing they were required to do a metallic survey. The metal detecting team found a shoe buckle, a bill hook and three musket balls. All of these artifacts were potential finds directly related to the fight and they were nowhere near where history had hinted the fight was. The trouble was, the Air Force had no idea of the significance of these items. Moreover, they had no one trained to identify and interpret them and as a result, these objects were nearly forgotten by the time the PRAP was instituted. They surfaced just as the organization was being built because the Park was negotiating with the Air Force for the additional land. The Air Force had the objects, but had no idea what to do with them. The civilian, local members of the team immediately recognized the importance of these objects, interpreted them and uncovered information regarding their location within our area of interest.

Now, all the pieces are in place for the team to start the first season of metallic survey, i.e. metal detecting (Figure 5).



Figure 5. Walking transects with metal detectors.

A review of where we stand at this point may prove useful:

A large team has been assembled reflecting people from the local community and recognized experts in various fields relating to conflict archaeology.

KOCOA analysis covers all areas of effort.

- We did not find any hint of a barn, nor the bridge, nor any other subsurface feature related to the battle or land topography.
- A team of volunteers has cleared acres of brush to facilitate the metallic survey. We have identified where modern structures once stood.
- We have created with the Geographic Information System, a digital map of the area so that we can model the 18th century landscape.
- We have the thin historical record to try to substantiate.
- We have the road, the water feature, the granite outcrop and the existing topographical features that match what would have been in existence on 19 April 1775. We can't confirm where Tabitha Nelson's house was located - yet.
- We know the Lexington and Lincoln town borders and that they bisect the site.
- We have three musket balls, a shoe buckle and a bill hook. We have a pretty good idea of their locations when found.

The first season of digging now begins. But what is it we are hoping to find? An anchor would be pretty spectacular, but not probable, and it certainly would not fit with what we think was an infantry encounter. Anything metallic from a soldier or horse tack from one of the British officer horses would be consistent with what we would expect. Buttons, buckles, sword furniture, musket parts, uniform badges, horseshoes and bridle parts are all potential finds. However, the duration of the battle matters. A prolonged encounter implies more items would find themselves on the ground. A brief encounter would imply fewer deposited artifacts. The only choice is to commence work and see what the ground gives up.

A team was called to try to rediscover the site of Tabitha Nelson's house. It was successful. Unfortunately, a utility pole had been dug and placed directly in the middle of the house and that ruined a good deal of our hope in being able to describe an early 18th century farm house. But, in true KOCO A tradition, it identifies the location of an Obstacle, Cover and concealment, Avenue of attack and egress, etc. We were able to follow the stone wall from her farm towards her father's farm but were still unable to find any vestige of a barn.

The metallic survey team was detailed to verify any connection with the granite outcropping. This feature held great opportunity for the team. It overlooks the road and offers good Cover and concealment. It enfildes the road as it comes from the west and offers a clear ambush site as the column approaches the bridge and is thus forced through a choke point. It also offers a reasonable escape route to the east, as there is a gradual slope from the top of the rocks towards the safety of Lexington.

Not one artifact was recovered from this area. Two 20th century homes had been built and torn down very close to this site. Was there anything there or was all the evidence destroyed through the years? It is impossible to say. The only thing we proved is that there is nothing there now. This was not the start hoped for but the absence of information is information and valuable to the archaeologist.

It is also fair to say that many of the minds identifying this granite outcrop as the best ambush site were not infantry veterans. One was Navy and there is scant naval experience to identify land based ambush sites and ground tactics. The seas are notoriously two-dimensional while the land is more three-dimensional.

To the west of the outcrop there is a natural bowl that connects to the back side of the granite outcrop. The 18th century water feature runs diagonally through the low ground of the bowl. The bowl, or swale, also offers a view down the road to the west, the direction from which the Crown forces will come upon their return. The known but undiscovered bridge is directly in front of this land feature. The three musket balls found in 2007 were to the west at the far end of the bowl. The team then attacked the area of the water feature and the bowl/swale, an area bounded by the new fence to the Air Force base to the west and the granite outcrop to the east.

Over the course of the three seasons there are no other words to use but unmitigated success. The metal detecting teams covered the bowl, both sides of the Battle and Airport Roads well to the west, and significant area far beyond what the data would ever support. The results defined a brief period in time, in a very confined spot, where men acted in a certain way.

Unmitigated Success defined

We found 30 musket balls (Figure 6), three buttons and a portion of a shoe buckle to add to the previously documented finds from the Air Force.

One of the preeminent conflict archaeologists in the world was part of the teams in the field. "One musket ball is hunting, two musket balls is a fight." This quote from him is perhaps the defining comment of the efforts of this group. We found the site. Now can we figure out how the fight unfolded based on what was retrieved from the ground. If that can be done then we have completed our mission of answering the question posed five years before.



Figure 6. William Rose and Joel Bohy with recovered musket ball.

We know a bit about what a militia and a professional army might do while one protects his property and one marches through, what is clearly hostile territory. The column in the road continues its momentum by just marching. Its job is to get somewhere, and in this case it is to get back to Boston. The militia are trying to prevent/impede the column. When the Crown forces encounter a bridge, a choke point in the road or an especially large or bellicose body of soldiers, light infantry are sent out to protect the flanks of the column until the issue is passed. They go out some tens of yards to push the opposing force out of gunshot. They then retreat to the safety of the road/column and repeat as necessary or until exhausted or defeated.

The arms they use are very similar but different in at least one sense. The British ordnance issued were long and short land pattern muskets. They are robust, larger caliber, brutal tools of war. The militia is using their personal weapons usually used for hunting the large number of waterfowl in the area. They are less robust, usually of smaller caliber and extremely familiar to the user/owner. They know the area and are organized along town lines and are willing to use less rigid behaviors than their regular counterparts. They are not out to conquer land as they already own it. Their job is to get these interlopers out of their town to somewhere else, ultimately Boston.

The finds describe a very discernible pattern of activity. It can be argued that British regular ammunition was usually larger, .64 caliber and larger. And militia ammunition for their fowlers was smaller, .62 caliber or less. In order to keep the level of frustration at a sufficiently irritating level, there is a level of overlap that could render analysis hopeless.

Not all musket balls are fired. In the heat of contact and action, cartridges are dropped. These unused balls can be a source of confusion or clarification and in this case clarification wins.

The scattering of the recovered musket balls tells the story. One of the features of this area is a fairly large topographical bowl. There is a crest and a gradual descent to the 18th century water feature and 18th century road. In military parlance there is the crest and the military crest. For an elevated feature, the highest point is clearly a crest. But in a military application you do not put your men up there because you highlight their silhouettes to the enemy. What you do is to place them below the crest some few yards so they still get the advantage of height but they are not silhouetted and thus visible to the enemy. This preserves a surprise element. Below the military crest and across a fairly large area, is an arc of fired musket balls of a usually larger caliber. Below that arc of fired balls about 50 yards away in the vicinity of the water feature and only 25 yards from the road, is a tightly packed line of fired musket balls of a usually smaller caliber. There is one unfired musket ball in the entire group. It is of smaller caliber and it is right in the middle of the larger fired balls. Many of the larger fired musket balls are found below large rocks or in the midst of larger rocks. The smaller balls are almost solely in softer soils near the water feature and oriented in a fairly compact straight line.



Figure 7. Recovered button.

The buttons are all civilian and represent what any male of the period would have on his waistcoat or frock coat. Two of the buttons are fairly far from the epicenter of the musket ball cloud but one is directly in it. This button is quite ornate and may be from the 1790s but it is there and it is 18th century most likely (Figure 7).

So, have we answered the question?

After the field seasons were complete and all the data had been collected, a Military Tactical Review was held with all the team members and additional experts on various objects associated with conflict as well as 18th century conflict and material culture. It was realized that even with the enormous amount of work done over more than five years and all the data recovered and analyzed there could be no definitive answer of what happened. So, the team proposed several possible scenarios that would fit the data we had. For six hours the team argued, listened to supporting information on any number of topics related to this fight and went on a trek through the battle site where each artifact's recovery location had been marked. Over the course of 30 minutes it was remarkable to see the participants gradually coalesce into the "accepted" answer. Perhaps the most cogent arguments came from two infantry officers who were combat veterans. They clearly thought this site was in fact the only good place for an ambush. They would have placed the militia right where we think they were in order to try to frustrate the designs of the Crown forces upon their retreat (Figure 8).

Here's the answer:

On or about 1330 Wednesday 19 April 1775 a company, or half company, of light infantry from an unknown British regiment was sent to deploy across a water feature to suppress a previously sited Colonial force set in ambush. This force was situated below the military crest of a shallow u-shaped bowl that provided for enfilading fire on a column of British troops marching in the road. They were coming from the west and approaching/crossing a bridge that caused them to slow and bunch up. As the light infantry took up their position on the flank of the column the Colonial force fired one volley. The Crown light infantry fired back, one volley, up the grade of the bowl to scatter or upon a scattering Colonial force commanded by Captain John Parker of Lexington.

Contact lasted for a brief period, perhaps as short as two minutes. There are no known casualties at this site. The militia dispersed and the column continued to the east to make further efforts to impede the Crown forces until they reached the eastern boundary of the Town of Lexington.

All this work for two paragraphs and these two paragraphs support the activity of two minutes?

So what - who cares?

These two questions still resonate. What was accomplished here? Each reader can come to his or her own answer but the team has some answers of their own. Among these are discovering something that was absolutely unknown. The act of discovery is compelling. Musket balls coming to light centuries after being fired tell a story of the participants who are unable to speak today.

An entire community was involved in the discovery. Myths were replaced with fact. The question of how Parker was able to get some of his men to march in harm's way again has been resurrected. We didn't answer this question, but telling the story of what he did may illuminate the why and how he did it. Parker got to the



Figure 8. Map of Parker's Revenge incident with distribution of recovered musket balls indicated (red dots indicate British fired, blue dots Colonial fired, blue dots with yellow border, Colonial dropped)

ambush site at least 2.5 hours before the Crown forces arrived on that spot. Imagine waiting to see whether you would return from one more potentially deadly encounter that day.

Apparently the study was sufficiently interesting that some people did care and wanted to find out more. Musket balls are frustratingly silent. We have them. We know where they landed.

We know pretty well who fired any particular one. We know some of their physical properties but can these data also help us to understand the fight even better? A ballistic study was undertaken as described in the companion manuscript by Joel Bohy³ with a detailed presentation of the experiment and the recorded results.⁴

Endnotes

- 1 Wilkes, M. W. 2016. Parker's Revenge Archaeological Project: Minute Man National Historical Park, Lexington, Massachusetts. Final report for the Friends of the Minute Man National Park. NRAP Project Number: MIMA 2012 B. 325 PP. May be found at: <http://www.friendsofminuteman.org/Parker's%20Revenge%20Archaeological%20Report.pdf>
- 2 Phinney, Elias. 1825. History of the Battle of Lexington on the Morning of 19th April 1775. Phelps and Farnham, Boston. Statement of Nathan Monroe, a participant, on 22 Dec 1824. Page 38.
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