

# CHALLENGES AND SPECIFICITIES OF BATTLEFIELD ARCHAEOLOGY IN ARGENTINA: THE CASE OF CEPEDA BATTLEFIELD, 1859

Juan B. Leoni

CONICET (Consejo Nacional de Investigaciones Científicas y Técnicas) – Departamento de Arqueología, Universidad Nacional de Rosario, Argentina. [jbleoni@hotmail.com](mailto:jbleoni@hotmail.com)

Lucas H. Martínez

Instituto Cultural de la Provincia de Buenos Aires, Argentina. [martinezluc@gmail.com](mailto:martinezluc@gmail.com)

## ABSTRACT

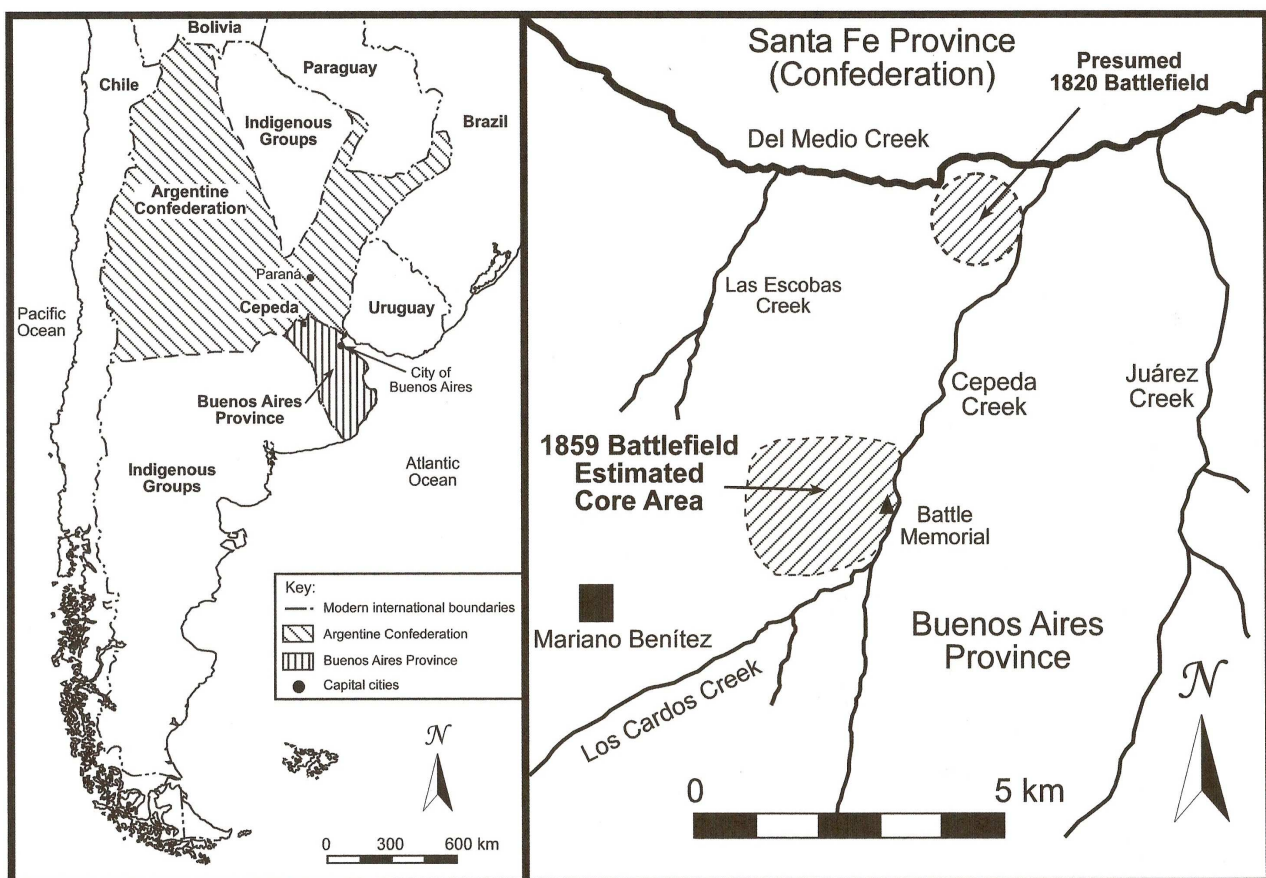
The battle of Cepeda, 1859, was one of the high points in the crucial confrontation between the Argentine Confederation and the then rebellious Buenos Aires Province, which shaped the process of modern nation state building. Whereas the confederate army commanded by president Justo J. Urquiza defeated the provincial army led by Bartolomé Mitre, this victory would not be decisive and more fighting would follow until Buenos Aires' definitive triumph in 1861. The battle has only been studied by historians, using the contradictory commanders' battle reports.

This paper presents the archaeological research on the battlefield. We discuss methods, finds, and interpretations, but also use this case study to address three major issues that differentiate this battlefield study from contemporary European and North American cases: 1) Heterodox battle tactics, which combined Napoleonic style tactics for infantry and artillery, with a locally developed emphasis on irregular and light cavalry; 2) A lack of written sources on both weapons employed and specific details of the battle; 3) Landscape transformations that significantly altered the original battle ground. As a whole, these issues - a widespread occurrence in Argentine XIXst century battles - challenge the development of battlefield studies and pose limitations to its interpretive potential.

## INTRODUCTION

Battlefield archaeology is a recent development in Latin America; in Argentina in particular, specific battlefield research started only in the beginning of the XXIst century (Landa 2013; Landa and De Lara 2014). Although it has gained in popularity in recent years, only a few battlefield archaeological studies are being carried out at present (Landa et al. 2014; Ramos et al. 2011). The study of the Cepeda battlefield presented here is one of those studies and it has started to produce significant information to complement and reshape existing historical accounts of this crucial event in Argentine history (Leoni and Martínez 2012; Leoni et al. 2013; Leoni et al. 2014).

We present here an overview of the ongoing archaeological research of the battlefield, discussing field methods, archaeological finds, and interpretations. We also use this case study to address several major issues that differentiate this battlefield from contemporary European and North American cases, and also challenge the interpretive potential of archaeological battlefield studies in Argentina.



**FIGURE 1 LEFT: MAP OF THE ARGENTINE CONFEDERATION AND BUENOS AIRES PROVINCE IN 1859, SHOWING LOCATION OF CEPEDA BATTLEFIELD. RIGHT: CEPEDA BATTLEFIELD STUDY AREA.**

## THE BATTLE OF CEPEDA: HISTORICAL BACKGROUND

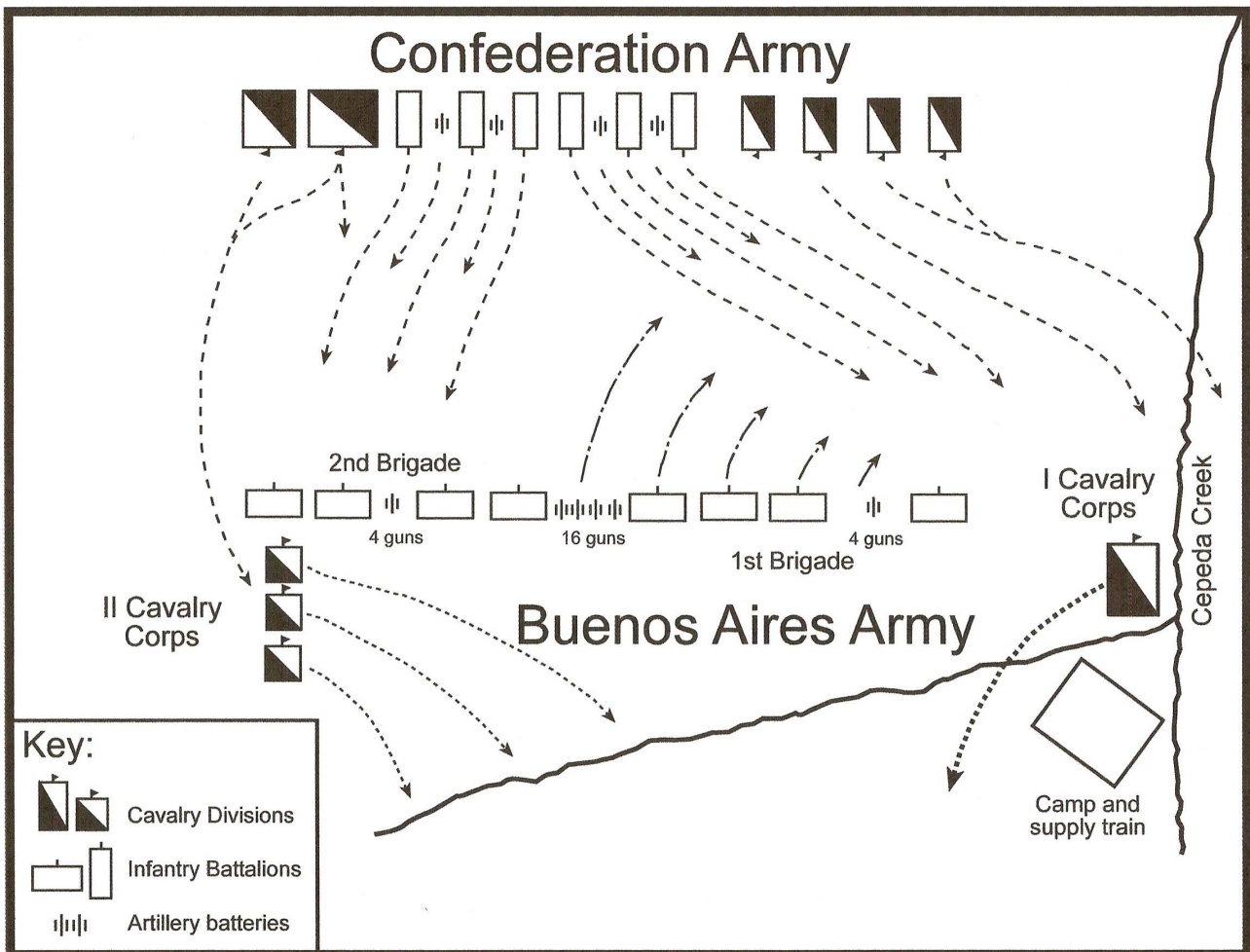
The battle of Cepeda was one of the high points of the military and political confrontation that faced the Argentine Confederation against the rebellious Buenos Aires Province between 1852 and 1861 (Figure 1, left). This struggle was crucial, as it shaped the process of modern nation state building. After the overthrowing of Juan Manuel de Rosas – who had dominated the political scene for the three previous decades and firmly opposed the promulgation of a constitution on which to base nation state construction– in 1852, the road for nation building seemed wide open. However, antagonisms and rivalries soon emerged. The political-economic

elite of Buenos Aires challenged Justo J. de Urquiza – the newly-elected president of the Argentine Confederation and defeater of Rosas – over the leadership of this crucial process, leading to the virtual segregation of Buenos Aires from the Confederation for almost a decade. By 1859, hostilities between the two polities had grown to a point of no return and both sides prepared for war (Best 1983; Beverina 1921; Cárcano 1921; Ruiz Moreno 2008; Sabato 2012).

The decisive clash took place at the Cepeda Creek, in northwestern Buenos Aires Province, on October 23, 1859 (Figure 1, right). The Confederate army, commanded by president Urquiza (about 12,000 men of which two thirds were cavalry; 28 guns and howitzers), defeated the provincial army (approximately 8,000 men, about half of them cavalry; 24 guns and howitzers), which was led by general Bartolomé Mitre, the most distinguished Buenos Aires military officer and a rising politician. But this victory meant no lasting peace, as the agreement signed after the battle was soon denounced by Buenos Aires, leading to another confrontation. The decisive battle took place on September 17, 1861, at the fields of Pavón (southern Santa Fe Province, in Confederate territory) and this time the army of Buenos Aires emerged victorious, allowing Buenos Aires to impose its liberal political program on the rest of the provinces (Best 1983; Beverina 1921; Cárcano 1921; Ruiz Moreno 2008).

First-hand accounts of the battle of Cepeda are limited, consisting basically in the official battle reports written by high military commanders. The Confederate reports – written the day after the battle – straightforwardly described a complete triumph, with the Confederate army prevailing on every part of the battlefield (Ministerio de Guerra y Marina 1860). Mitre's (1921[1859]) account, on the other hand, acknowledged the defeat of his cavalry on both flanks but claimed a tactical victory in the centre, where Buenos Aires infantry and artillery supposedly defeated their Confederate counterparts. However, surrounded by large Confederate cavalry forces, Mitre ordered a night retreat with the remnants of his force (about 2,500 men) to the town of San Nicolás (distant about 80 km away), where they embarked on navy vessels that took them back to Buenos Aires city.

The battle has been studied by historians but their interpretations have moved little beyond a basic discussion of the commanders' reports and largely conjectural interpretations of the facts. No maps from the time of the battle exist either. The only available maps are in fact sketches drawn by historians many decades later, mostly translating general Mitre's battle account into a graphic form (Beverina 1921; Cárcano 1921) (Figure 2).



**FIGURE 2 SKETCH OF THE BATTLE OF CEPEDA BASED ON THE OFFICIAL BATTLE REPORTS (ADAPTED FROM BEVERINA 1921)**

## ARCHAEOLOGICAL RESEARCH AT CEPEDA BATTLEFIELD

Our historical archaeological investigation of the Cepeda battlefield started in 2012 and it is organized along three main lines of research:

- Documentary research directed to widen the documentary corpus about the battle. A special emphasis is placed on determining the characteristics of weapons and equipment used by the antagonist armies, an aspect poorly explored by previous historical works. While it is generally assumed that Buenos Aires troops were better equipped and trained (e.g. Goyret 1965), few data have supported this claim so far.

Our documentary research has produced previously unknown material, such as the records of Buenos Aires Parque de Artillería (office in charge of supplying weapons and military equipments to the army) (Archivo General de la Nación 1859), which show that Buenos Aires made a sustained effort the months before the battle to acquire modern – for the local context – weapons. These included French, English and Belgian smoothbore percussion firearms for its infantry and cavalry units, as well as a small quantity of Enfield rifles. Friction primers for artillery were incorporated as well. While not enough to provide a decisive technological edge, these weapons were an expression of an economic and financial superiority that the Confederation would ultimately not be able to match (Garavaglia 2015), its army relying mostly on older flintlocks and edged weapons.

Other important documentary information has allowed us to calculate the number and caliber of the artillery employed by both armies (something previously unknown), as well as to determine the composition and casualties suffered by some of the infantry battalions and cavalry regiments participating in the battle. Additionally, available enrollment forms help characterize the identities, physical aspects and service histories of individual soldiers on both sides, something usually overlooked in historical accounts of the campaign. Nevertheless, while this line of research has produced valuable information, it has hitherto failed to determine the specific models of firearms used by both armies as well as to uncover witnesses' accounts that could be used to improve the understanding of specific battle events.

- The study includes existing artifacts collections from the battlefield, owned by relic collectors, local inhabitants and museums. The battlefield area is at present subdivided into several private agricultural fields, which have been intensively farmed since at least the end of the XIXth century. As a result, significant numbers of battle-related artifacts have been removed after being accidentally found in the course of rural work. Some of these materials have been donated to a recently created museum in the nearby town of Mariano Benítez (*Museo Histórico "Batallas de Cepeda"*), while others remain in private collections. More recently, relic collectors with metal detectors have removed artifacts as well, disturbing the archaeological record to a so far unknown extent.

This situation has forced us to include the analysis of these materials as a regular part of our research. Despite their general lack of provenience information, these materials help both to assess the disturbance caused to the archaeological record of the battle as well as to illustrate the variety of weapons and equipments employed in the battle.

- Archaeological survey and excavation of the battlefield area, following standard battlefield archaeology methodology (e.g. Bonsall 2008; Fox 1993; Haeckr and Mauck 1997; Scott *et al.* 1989; Smith *et al.* 2009; Sutherland and Holst 2005). Metal detector surveys are carried out with the general goal of sampling different sectors of the battlefield and generating a spatial database of battle-related

materials. The spatial patterning of different types of artifacts can later be used to infer battle events, as well as contrasted with the information from the written documents.

The archaeological research of the battlefield has faced several difficulties. First, while the general location of the battlefield has been pointed out, knowledge of its true extension, limits and location of specific events was largely lacking. This derives from the scarce geographical features mentioned in the participants' accounts of the battle, which are limited to the local water courses and a few unnamed subtle rises on an otherwise flat, treeless, and monotonous terrain.

The battle tactics employed at the time have also contributed to create an extensive battlefield, structured in a complex manner. The battle events seem to have occurred over an area of several square kilometers, with a core area where 16 infantry battalions and about 50 artillery pieces from both armies fought for about two or three hours. On the other hand, substantial cavalry forces (as many as 10,000 men or more, from both armies) moved and fought over a vast area around this core, actually defining the outcome of the battle. The archaeological correlate resulting from this tactical situation seems to be a dense – though not homogeneous – concentration of battle-related artifacts in a core zone of about 4 km<sup>2</sup>, and a surrounding or peripheral area – where cavalry operated – of an undetermined extension in which the archaeological materials are fewer in numbers and do not show well-defined concentrations, as mostly edged weapons were employed (Figure 1, right).



**FIGURE 3 CEPEDA BATTLEFIELD MATERIALS: A) FLINTLOCK LOCKPLATE AND COCKS; B) TRIGGERS, TRIGGER GUARD AND SPRINGS; C) CAVALRY LANCE POINTS; D) SOCKET BAYONET; E) CANISTER SHOT AND SOLID SHOT; F) SPHERICAL SHELL**

Archaeological research has concentrated on the core zone of the battlefield. Typical battle-related finds include:

- Firearms ammunition: lead spherical musket; lead conical bullets from Enfield rifles, revolvers and pistols; metallic cases from revolver and pistol ammunition.
- Firearms parts: musket sideplates and springs, a terminal ramrod pipe, ramrod worms. Flintlock cocks, lock plates, sideplates, triggers, trigger guards, among other elements, have been recorded in museum and private collections as well (Figure 3a, b).
- Artillery ammunition: iron shot for canister, explosive shell fragments, and friction primers. Museum and private collections include a few cannonballs, as well as a complete spherical shell (Figure 3e, f).
- Uniform items: military buttons, both plain and with inscriptions (e.g. unit numbers); bronze and iron buckles from belts and webbing; rivets. Museum and private collections are especially rich in these types of items, reflecting a somehow selective relic collecting on the battlefield.

- Edged weapons: parts of bayonet and saber blades; iron bottom pieces of cavalry lances. Museum and private collections include examples of complete socket bayonets and points of cavalry lances (Figure 3c, d).
- Cavalry items: horseshoes, spurs, tacks, buckles. Complete stirrups and spurs can also be found in private and museum collections.

These types of artifacts show differential spatial patterning – varying according to their presence/absence, quantity, and association – in the different surveyed parts of the battlefield. However, interpretation is hampered by the lack of precise information about the different types of firearms, artillery and edge weapons employed by both armies. The lack of standardization that characterized both armies at the time also adds to this situation. Only a few specific types of weapons, such as the Enfield rifles, are known to have been used by only one of the opponents. Thus, unlike contemporary European and North American cases, the armies of Buenos Aires and the Confederation lack an unmistakable archaeological signature.

Our fieldwork has concentrated on several Survey Sectors (Figure 4). We have identified concentrations of artifacts that seem to correspond to different battle events:

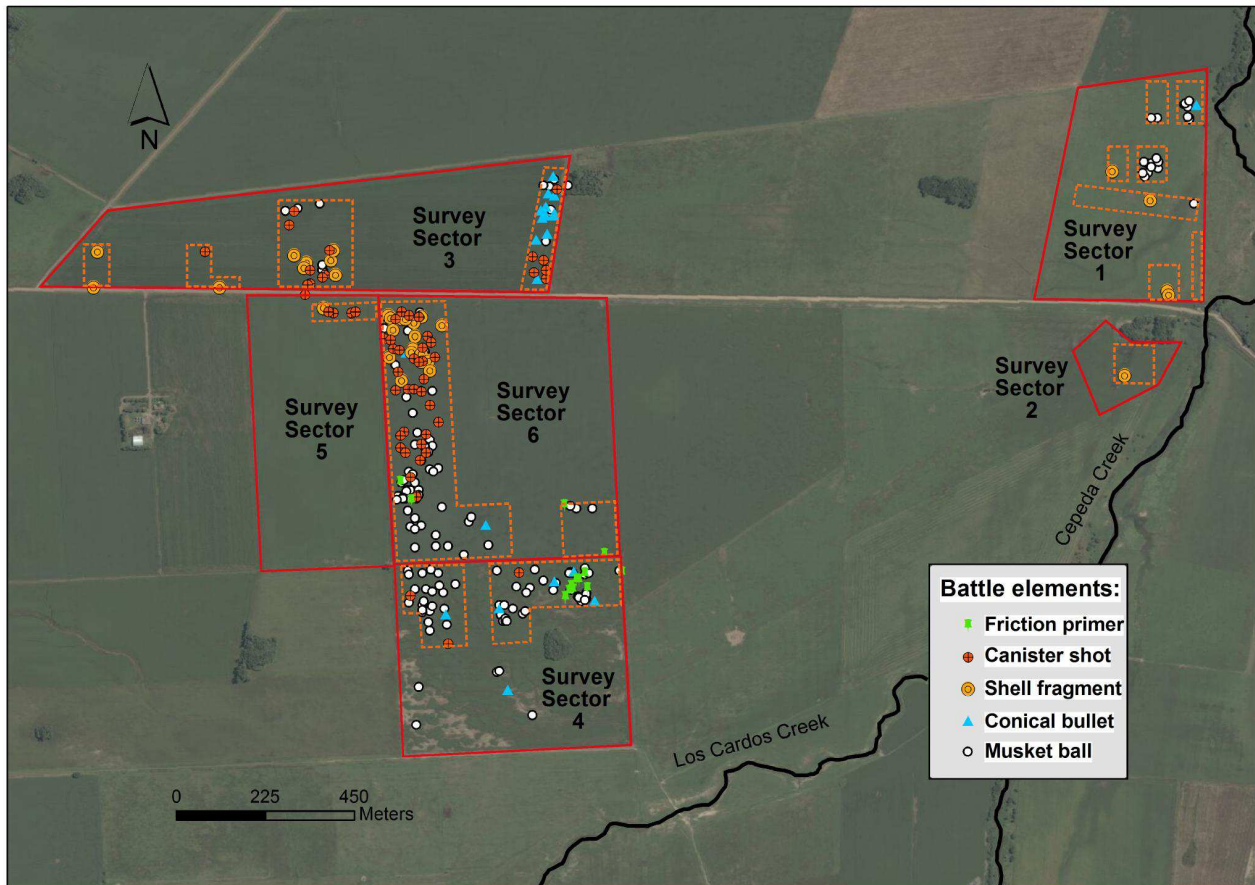
- Survey Sector 1: it is located on the left bank of the Cepeda stream and shows evidence of combat involving artillery, infantry and cavalry (Figure 4). We believe this corresponds to events that took place on the right of Buenos Aires army's battle line (Leoni *et al.* 2014). There, according to Mitre, four infantry battalions with artillery support repulsed an advance by several Confederate infantry battalions and an 800-strong cavalry column (Mitre 1921[1859]).
- Survey Sectors 3, 4 and 6: this area is located about 1.3 km to the west of Survey Sector 1 (Figure 4). Artifact patterning in these Survey Sectors shows well defined shell fragments and canister concentrations, musket balls scatters, and concentrations of friction primers (Figure 4). We interpret these spatial distributions as reflecting:

The line of advance of a Confederate infantry force through a "no man's land" between the starting battle lines. This force was targeted by shell and canister artillery fire as it moved southwards, and finally engaged in a musket firefight with Buenos Aires forces situated in the southern part of Sector 6 and in Sector 4;

Probable Buenos Aires artillery positions, as reflected by the concentrations of friction primers in Survey Sectors 4 and 6;

Additionally, a cluster of Enfield bullets in the eastern extreme of Survey Sector 3 could be indicating the position of Confederate troops attracting fire from Buenos Aires riflemen (called *cazadores* – skirmishers –, they formed a company in every infantry battalion).

These finds could correspond to events that took place on the left of Buenos Aires army's battle line, where three infantry battalions were routed by a seemingly well-coordinated Confederate cavalry, infantry and artillery attack (Ministerio de Guerra y Marina 1860). However, the interpretation might be more complex than suggested above, as Mitre claims in his report that later in the battle he counterattacked with his triumphant right flank infantry and artillery, driving back the Confederate forces that had routed the left of his battle line (Mitre 1921[1859]). If this were the case, then these Survey Sectors would include intermingled patterns resulting from temporally different battle actions.



**FIGURE 4** SURVEY SECTORS AND SPATIAL DISTRIBUTION OF THE MAIN TYPES OF BATTLE-RELATED ARTIFACTS (SHELL FRAGMENTS, CANISTER SHOT, FRICTION PRIMERS, MUSKET BALLS, AND CONICAL BULLETS).

- Survey Sector 4: in this sector, the occurrence of glass and ceramic wares, as well as heterogeneous metal hardware, along with battle-related material, might hint at the presence of part of Buenos Aires pre-battle encampment (Figure 4). The battle accounts indicate that Confederate forces looted Buenos Aires army's camp, which was supposedly located to the rear of its battle line (Ministerio de Guerra y Marina 1860; Mitre 1921[1859]).

## DISCUSSION: CHALLENGES AND SPECIFICITIES OF BATTLEFIELD ARCHAEOLOGY IN ARGENTINA

Although the historical archaeological study of the Cepeda battlefield is undoubtedly enhancing the understanding of this crucial battle, moving well beyond previous historic studies, it faces several difficulties that hinder its interpretive potential. These difficulties illustrate well the limitations and challenges that affect the development of battlefield archaeology in Argentina, as they seem to be a widespread occurrence in local XIXth century battles.

A first challenge is posed by the heterodox battle tactics employed at the time, which combined typical line-and-column Napoleonic-style tactics for the infantry and artillery, with a local emphasis on irregular and light cavalry actions. While the Independence Wars (ca. 1810-1824) were fought along traditional European tactical lines, albeit with smaller and sometimes poorly-equipped armies, the endemic Civil Wars (ca. 1820-1852) that engulfed Argentina for the subsequent three decades were characterized by the rise of cavalry to a predominant and decisive role. This reflected the cultural character of the rural population as well as the constraints derived from a territorially extensive and sparsely populated country. Infantry and artillery were a minor component in these armies, playing only a subsidiary role in battles that

were almost exclusively defined by lance and saber charges. The wars between Buenos Aires and the Confederation (1852-1861) were a turning point in this tactical situation. Whereas the Confederate army stuck to the cavalry-first tradition, Buenos Aires tried to organize its army along contemporary European and North American parameters, with strong infantry and artillery components as its main force (Best 1983; Beverina 1921; Ruiz Moreno 2008). This transition successfully crystallized at the battle of Pavón (1861), but at Cepeda it was only starting to take place. Archaeologically speaking, this tactical heterodoxy determines extensive battlefields with highly dispersed artifacts, except for the areas where infantry and artillery fought, which in turn most frequently were not the areas where the battle was decided.

Second, unlike most of the contemporary European and North American cases, Argentine XIXth century battles are usually poorly documented. This situation results not only in biased or limited understandings of the battle events, but also in a lack of knowledge of the weapons and equipments employed by the participants. This is compounded by the fact that a characteristic lack of standardization – typical of non-industrialized countries –, prevents a clear-cut archaeological distinction between opposing armies. The interpretive potential of battlefield archaeology is thus considerably challenged, as it has to deal with complex bidimensional palimpsests that are hard to decipher without the aid of detailed written accounts about the specific combat events. Battle reconstructions are, as a result, more tentative, open-ended, and subject to conjectural interpretation.

Finally, lacking battlefield protection regulations, many an Argentine XIXth century battlefield has been disturbed and transformed by urban and rural development. Cepeda, Pavón, and many others, are located well within the country's agricultural productive heartland, subject to more than a century of continuous rural work. As a result, original conflict landscapes have been drastically altered by the construction of rural settlements, the erection of wire fences, road construction, and tree planting, as well as the removal of artifacts. Careful battlefield terrain reconstructions are needed to overcome this situation, which also poses limits to the archaeological fieldwork as it becomes dependent on both the calendar of the agricultural productive cycle and on land owner's authorization to work within private properties.

While the above-mentioned challenges certainly hamper the development of Argentine battlefield archaeology, seemingly placing it at a disadvantageous situation compared to its North American and European counterparts, the archaeological research of battlefields can still make substantial contributions. It can provide a better understanding of crucial (and largely forgotten) events of Argentine national history, while at the same time illustrating specific and original forms of fighting that do not completely conform to the better-known European and North American standards. As the study of Cepeda battle shows, battlefield archaeology can be – despite its difficulties – a promising and fruitful undertaking, with repercussions that exceed the purely academic milieu and reach out to the general public.

## REFERENCES

Archivo General de la Nación (National General Archive)

1859 *Relaciones del Parque de Artillería de Buenos Aires*. Room X, 20-2-5, Buenos Aires, Argentina

Best, F

1983 *Historia de las guerras argentinas. De la independencia, internacionales, civiles y con el indio*, Tomo 2, Graficsur, Buenos Aires.

Beverina, J

1921 *La Guerra del Paraguay*, Tomo IV, Ferrari, Buenos Aires.

Bonsall, J

2008 The study of small finds at the 1644 battle of Cheriton, in T. Pollard and I. Banks (eds.), *Scorched earth: studies in the archaeology of conflict*, pp. 29-52, Brill, Leiden.

- Cárcano, RJ  
1921 *Del sitio de Buenos Aires al campo de Cepeda (1852-1859)*, Imprenta Coni, Buenos Aires.
- Fox, RA  
1993 *Archaeology, history, and Custer's last battle*, University of Oklahoma Press, Norman.
- Garavaglia, JC  
2015 *La disputa por la construcción nacional argentina. Buenos Aires, la Confederación y las provincias (1850-1865)*, Prometeo, Buenos Aires.
- Goyret, JT  
1965 La campaña de Pavón. 1859-1861, in CA García Belsunce (ed.), *Pavón y la crisis de la Confederación*, pp. 253-310, Equipos de Investigación Histórica, Buenos Aires.
- Haecker, CM and Mauck, JG  
1997 *On the Prairie of Palo Alto: Historical Archaeology of the U.S.-Mexican War Battlefield*, Texas A&M University Press, College Station.
- Landa, C  
2013 Arqueología de campos de batalla en Latinoamérica: apenas un comienzo. *Arqueología* vol. 19, no. 2, pp. 265-286.
- Landa, C. and Hernández de Lara, O (eds.)  
2014 *Sobre campos de batalla: arqueología de conflictos bélicos en América Latina*, Aspha, Buenos Aires.
- Landa, C, Gómez Romero, F, Montanari, E, Pineau, V, Bognanni, F, De Rosa, H, Caretti, F, Doval, J, Pichipil, M, Blaseotto, A, Raies, A and Salminci, P  
2014 Un zarpazo en el olvido de la historia: batalla de La Verde (1874), Partido de 25 de Mayo, Argentina, in C Landa and Hernández de Lara, O, *Sobre campos de batalla: arqueología de conflictos bélicos en América Latina*, pp. 139-165, Aspha, Buenos Aires.
- Leoni, JB and Martínez, LH  
2012 Un abordaje arqueológico de la batalla de Cepeda, 1859. *Teoría y Práctica de la Arqueología Histórica Latinoamericana* vol. I, no. I, pp. 139-150
- Leoni, JB, Martínez, LH and Porfidia, MA  
2013 Arqueología de la batalla de Cepeda, 1859 (Partido de Pergamino, Prov. de Buenos Aires): metodología, expectativas arqueológicas y primeros resultados, in E Rodríguez Leirado and Schávelzon, D (eds.), *Actas del V Congreso Nacional de Arqueología Histórica Argentina*, Tomo 2, pp. 571-594, Editorial Académica Española, Saarbrücken.
- Leoni, JB, Martínez, LH, Porfidia, MA and Ganem, M  
2014 "...un reñido combate bien nutrido de fuego de artillería e infantería...": la batalla de Cepeda 1859, desde una perspectiva arqueológica, in C. Landa and Hernández de Lara, O (eds.), *Sobre campos de batalla: arqueología de conflictos bélicos en América Latina*, pp. 109-138, Aspha, Buenos Aires.
- Ministerio de Guerra y Marina de la Confederación Argentina (Ministry of War and Navy of the Argentine Confederation)  
1860 *Memoria presentada por el Ministro de Estado en el Departamento de Guerra y Marina al Congreso Legislativo de la Confederación Argentina en su sesión ordinaria de 1860*, Berthein, Buenos Aires.

- Mitre, B  
 1921 [1859] Parte de la batalla de Cepeda, in *Archivo del General Mitre, Tomo XVI. Campaña de Cepeda. Años 1858-1859*, pp. 224-242, Sopena, Barcelona.
- Ramos, M, Bognanni, F, Lanza, M, Helfer, V, González Toralbo, C, Senesi, R, Hernández de Lara, O, Pinochet H and Clavijo, J  
 2011 Arqueología histórica de la batalla de Vuelta de Obligado, Provincia de Buenos Aires, Argentina, in M. Ramos and Hernández de Lara, O (eds.), *Arqueología Histórica en América Latina*, pp. 13-32, PROARHEP, Luján.
- Ruiz Moreno, IJ  
 2008 *Campañas militares argentinas. La política y la guerra. Tomo 3: Rebeliones y crisis internacional (1854-1865)*, Claridad, Buenos Aires.
- Sabato, H  
 2012 *Historia de la Argentina 1852-1890, Siglo Veintiuno*, Buenos Aires.
- Scott, DD., Fox, RA, Connor, MA and Harmon, D  
 1989 Archaeological perspectives on the battle of the Little Big Horn, University of Oklahoma Press, Norman.
- Smith, SD, Legg JB and Wilson, TS  
 2009 *The archaeology of the Camden battlefield: history, private collections, and field investigations*, South Carolina Institute of Archaeology and Anthropology, Columbia, South Carolina.
- Sutherland, TL and Holst, M  
 2005 *Battlefield archaeology: a guide to the archaeology of conflict*. British Archaeological Jobs Resource, <http://www.bajr.org/BAJRGuides/8.Battlefield-Archaeology-the-Archaeology-of-Conflict/BAJRBattleGuide.pdf> [accessed May 2016]