

An archaeological analysis of a battlefield of the Second Punic War: the camps of the battle of Baecula

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Since 2002, our team at the University of Jaén's Research Institute for Iberian Archaeology has been undertaking an archaeological research project focusing on the analysis of the site of a conflict that can indisputably be dated to the final phase of the Second Punic War. Based on the topography, descriptions in the ancient sources, and archaeological data, we present the hypothesis that the site we have located corresponds to that of the battle of Baecula. In that confrontation in 208 B.C., Scipio the Younger faced Hasdrubal Barca. It was a momentous battle, at least in terms of its subsequent outcome, given that it could be considered the event that triggered Hasdrubal's withdrawal to Italy.¹

Our research project has yielded information which we believe to be paradigmatic in two respects. First, we have been able to ascertain the size of the area over which an armed confrontation of this type would have taken place, thanks to the identification of determining elements such as the different camps set up for the battle and their sizes. It covers the area where the armies clashed, where they were positioned and deployed, their movements on the battlefield, and so forth. Second, thanks to intensive sampling, we have recovered a corpus of finds that may be used in the future as a reference for the allocation of other sites to the period of the Second Punic War.

The present article is a compilation of the phases and results of our project. It offers a general framework for understanding the detailed analysis of the identified camp structures. Recent excavations carried out at the encampment area, where Hasdrubal and Scipio will have set up their camps before and after the battle, have revealed the typical evidence from a campaign camp — the traces of a stay of barely a few days at a place that was not subsequently re-occupied, thereby allowing it to be preserved down to the present day. Our work has also had to consider a potential conflict between the philological and epigraphic tradition, on the one hand, and, on the other, archaeological research; in the present context we do not think that they should be considered as conflicting.

The Second Punic War in the Alto Guadalquivir: silver, copper and grain

The site is located in the south of the Iberian peninsula, in the Alto Guadalquivir, a region frequently mentioned in the sources with reference to the Second Punic War,

1 K. Zimmermann, "Roman strategy and aims in the Second Punic War," in D. Hoyos (ed.), *A companion to the Punic Wars* (Malden, MA 2011) 293; J. P. Bellón *et al.*, "Baecula. An archaeological analysis of the location of a battle of the Second Punic War," in Á. Morillo, N. Hanel and E. Martín (edd.), *Limes XX* (Anejos de Gladius 13; 2009) 17-29; J. P. Bellón, "Estudio de los escenarios bélicos anibólicos de Numistro y Grumentum (Basilicata, Italia): Numistro," *Informes y Trabajos* 7 (2012) 229-43; *id. et al.*, "Analyse archéologique d'un champ de bataille de la deuxième guerre punique: Baecula," in F. Cadiou and M. Navarro (edd.), *La guerre et ses traces: conflits et sociétés en Hispanie à l'époque de la conquête romaine (IIIe-Ier s. av. J.-C.)* (Ausonius Mémoires 37; 2014) 25-53; *id. et al.*, "Una metodología arqueológica para el estudio de los campos de batalla," in *id. et al.* (edd.), *La Segunda Guerra Púnica en la Península Ibérica. Baecula, Arqueología de una batalla* (Jaén 2015) 229-56.

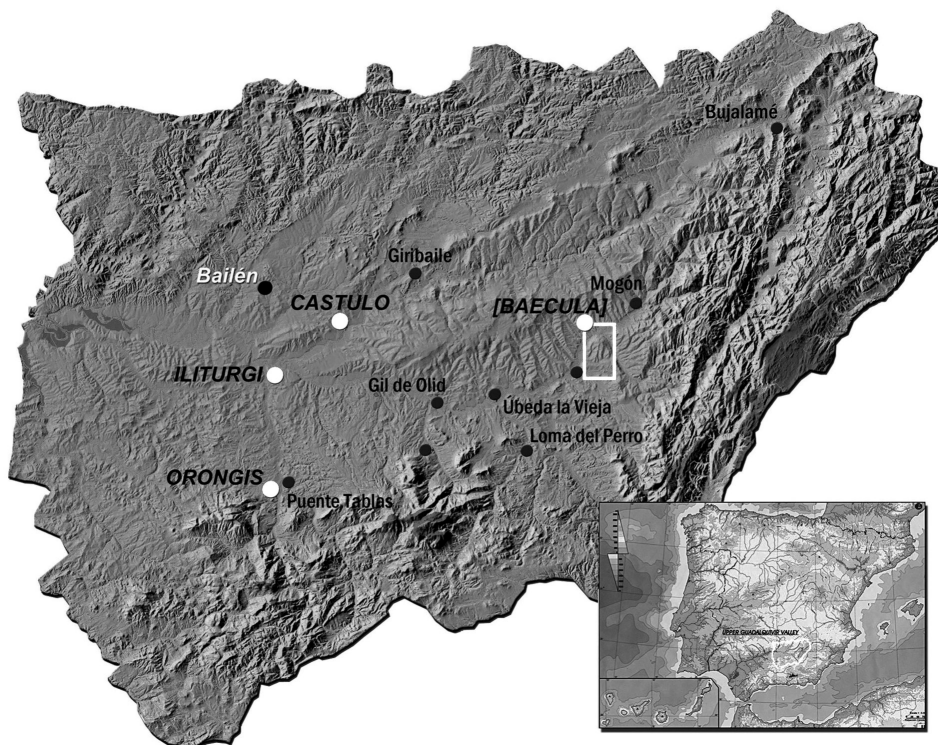


Fig. 1. The Second Punic War in the Upper Guadalquivir Valley.

highlighting the rôle played by towns such as Castulo or Iliturgi.² References to the marriage of Hannibal Barca to an indigenous aristocratic woman from Castulo (Linares, Jaén)³ demonstrate the interest of the Carthaginian general in this rich mining area that, together with Cartagena and the N part of the province of Huelva, produced his main supply of copper, silver, and other raw materials.⁴ Both Hannibal's marriage in Castulo and the subsequent outcome of the different battles, skirmishes and sieges (Castulo, Iliturgi, Amtorgis, Ilorci,⁵ Orongis, Baecula) indicate the strategic importance of this territory, not unlike that of the Ebro valley or Carthago Nova itself in the general context of the war in Spain (fig. 1). As we have argued elsewhere,⁶ it is possible to distinguish two phases in Rome's general strategy:

- 2 Broadly speaking, we can limit this geographical region to the Guadalquivir valley in the provinces of Jaén and eastern Córdoba. We confine the area to the zone between Iliturgi and Castulo and the source of the river, which Pliny (NH 3.9) correctly placed in the *Saltus Tugiensis*, where the main Iberian *oppida* studied by us lay.
- 3 Liv. 24.41: *Castulo, urbs Hispaniae valida ac nobilis et adeo coniuncta societate poenis, ut uxor inde Hannibali esset*; Sil. Ital. 3.96-107: *Sic ille, at Cirrhaei, sanguis Imilce/Castalii, cui materno nomine dicta / Castulo Phoebi servat cognomina vatis...*
- 4 A. Montenegro, "La conquista de Hispania por Roma, 218 a.C.," in J. M^a Jover (dir.), *Historia de España de Ramón Menéndez Pidal. II: Hispania romana* (Madrid 1991) 1-46; J. L. López Castro, *Hispania poena: los Fenicios en la Hispania romana (206 a.C.–96 d.C.)* (Barcelona 1995); M. Bendala Galán, *Hijos del Rayo: los Barca y el dominio cartaginés en Hispania* (Madrid 2005); Hoyos (supra n.1).
- 5 We support the hypothesis that *Amtorgis/Ilorci* was located in the Alto Guadalquivir, in what has become known as the "Batalla del Betis superior".
- 6 J. P. Bellón *et al.*, "Baecula. Arqueología de una batalla," in A. Gálvez del Postigo (coord.), *Proyectos de investigación de la Universidad de Jaén 2002-2003* (Jaén 2004) 11-66.

1. The first begins with the arrival of the Roman generals Publius and Gnaeus Scipio in c.212 and a series of fights around Castulo, Iliturgi and Amtorgis/Ilorci.⁷ It ends with the traumatic death of both generals in two battles, and, following the disaster at Cannae, with a clear sign that the balance was tipping in favour of the Carthaginian side.

2. The second phase followed the taking of Carthago Nova in 209, when Scipio the Younger was in charge of leading the Roman army on the Alto Guadalquivir front, where the battles of Baecula and Orongis were fought, Iliturgi and Ilipa were taken, and Castulo surrendered in 206. In this phase the territory came definitively under Rome's control.⁸

In the first phase, Gnaeus and Publius Scipio's strategy did not lead to a consolidation of territorial control of the area. During the second phase, however, the context was quite different. Scipio the Younger, perhaps in circumstances different to that of the Carthaginian army after the defeat of Carthago Nova, consolidated the conquered territory as part of Roman rule of *Hispania*, a long process that would only culminate in the 1st c. B.C.⁹

On the other hand, the strictly archaeological evidence concerning the supply of metal is still sparse,¹⁰ although we can assume that there would not have been any major changes in the exploitation of the silver mines in the Castulo area in terms of the structure of production. This is because we know that the town was 'allied' to the Carthaginians. In other words, it is possible to defend the hypothesis that an indigenous Iberian structure of exploitation existed prior to the arrival of the Carthaginians, who then stepped it up; but it is also true that no archaeological evidence indicates that a foreign (Carthaginian) structure replaced or dramatically modified the former.¹¹ Thus we will have to wait for a more exhaustive archaeological study before we can clarify this situation.

Recent archaeological investigation highlights the dearth of well-defined pre-Roman mining installations following various prospecting campaigns covering an extensive area in the eastern Sierra Morena mountains.¹² The only exceptions are those indicated by

7 We also have to place the demise of Scipio in this area, as well as the funerary monument dedicated to him (*Scipionis rogos*) that is cited by Pliny (NH 3.9), the location of which is still subject to heated debate: A. Canto, "Ilorci, *Scipionis rogos* (Plinio, NH III, 9) y algunos problemas de la Segunda Guerra Púnica en Hispania," *RivStorAnt* 29 (1999) 127-67; P. Moret, "Tours de guet, maisons à tour et petits établissements fortifiés de l'Hispanie républicaine: l'apport des sources littéraires," in P. Moret and T. Chapa (edd.), *Torres, atalayas y casas fortificadas. Explotación y control del territorio en Hispania (s. III a. de C.–s. I d. de C.)* (Jaén 2004) 13-30.

8 A. Ruiz and M. Molinos, *Los Iberos: análisis arqueológico de un proceso histórico* (Barcelona 1993); iid., *Iberos en Jaén* (Jaén 2007); A. Ruiz et al., "El factor ibero en la batalla de Baecula: los efectos colaterales de la guerra," *Cuad. Prehist. y Arq. Granada* 23 (2013) 199-225.

9 P. Le Roux, *Romanos de España. Ciudades y política en las provincias (siglo II a.C.–siglo III d.C.)* (Sant Boi de Llobregat 2006).

10 L. Arboledas, F. Contreras and A. Onorato, "La explotación minera antigua en Sierra Morena oriental y su vinculación con el territorio," *Cuad. Prehist. y Arq. Granada* 24 (2014) 111-45.

11 It would be necessary to review the status of Iberian towns, their level of independence and/or subjection to the Carthaginians in the last quarter of the 3rd c. B.C. The Roman sources confer on them a certain capacity to take decisions with regard to the position they took in the conflict, although it must be assumed that there would have been limitations, pacts or relationships of dependency between them and the Carthaginians. We should be able to see a certain correlation with the situation in the south of Italy, specifically with the rôle played by indigenous Lucanian élites in the Second Punic War: cf. M. Fronda, *Between Rome and Carthage. Southern Italy during the Second Punic War* (Cambridge 2010).

12 Arboledas (supra n.10); L. M^a Gutiérrez, C. Torres and J. P. Bellón, "Les castilletes (habitats miniers fortifiés) de Sierra Morena (Espagne)," in A. Orejas (ed.), *Atlas historique des zones*

C. Domergue in his catalogue of mines at La Laguna, near the *oppidum* of Giribaile, where he points to the presence of Iberian painted ware.¹³ The argument used for dating is that the intensive mining during the 2nd and 1st c. B.C. may have obliterated any remains of previous workings. There are no archaeological data on Iberian mining in general terms between the 6th and the 3rd c. B.C. Yet other indicators of pre-Roman metalworking include the development of copper, silver and bronze metallurgy as attested by votive deposits in the Iberian shrines of Collado de los Jardines (Santa Elena, Jaén) and Altos del Sotillo (Castellar, Jaén).¹⁴ These ex-votos also functioned as a shared identity symbol for the communities worshipping the same divinities in those regional sanctuaries.¹⁵

A different picture emerges from the written sources, which in general suggest that mining received a boost under Carthaginian domination.¹⁶ This is corroborated by the first minting of coins on a Carthaginian module at Castulo,¹⁷ one of the first indigenous mints in the whole of the peninsula. There is also a tradition that places the Baebelo mine, which furnished Hannibal with 300 lbs of silver a day,¹⁸ near the town of Castulo. Various scholars have suggested identifying this mine with the site of Palazuelos (Carboneros, Jaén), where the monumentality of the preserved structures has been associated with Carthaginian activity in the area.¹⁹ Other scholars, however, place the mine in the orbit of Carthago Nova,²⁰ and yet others in Marquesado de Cenete (Granada).²¹

Little more can be said in archaeological terms about the importance of the region's capacity for grain production for Carthaginian armies stationed in the area, although for

minières d'Europe II (Luxembourg 2003) 1-12.

- 13 C. Domergue, *Catalogue des mines et des fonderies antiques de la péninsule ibérique* (Madrid 1988) 253-92. As we know that this type of pottery was made over a long period, up to the 1st c. A.D., it cannot be considered a reliable indicator for considering the La Laguna foundry as exclusively indigenous (Iberian); its chronology may date back to the 2nd/1st c. B.C.
- 14 L. Arboledas, *Minería y metalurgia romana en el Alto Guadalquivir: aproximación desde las fuentes escritas y el registro arqueológico* (Ph.D. diss., Univ. of Granada 2007); id., J. M. Fabre and J. M. Mantenant, "Primera exploración arqueológica de las minas romanas de Sierra Morena oriental: El Centenillo (Baños de la Encina, Jaén)," *Zephyrus* 68 (2011) 211-28.
- 15 C. Rueda, *Territorio, culto e iconografía en los santuarios iberos del Alto Guadalquivir* (ss. IV a.n.e.–I d.n.e.) (Jaén 2011).
- 16 Diod. 5.36.1 and 5.38.2-3; Plin., *NH* 33.96-97.
- 17 M^a P. García-Bellido, "Problemas técnicos de la fabricación de moneda en la Antigüedad," *Numisma* 174-176 (1982) 9-50; id. and C. Blázquez, *Diccionario de cecas y pueblos hispánicos* (Madrid 2002) vol. 2, 226-28.
- 18 Plin., *NH* 36.96: *Baebelo appellatur hodie qui CCC pondo Hannibali sumministravit in dies, ad MC passus iam cavato monte*.
- 19 M. Jimeno, *Catálogo de los obispos de las iglesias catedrales de la Diócesis de Jaén* (Madrid 1654); P. Mesa y Álvarez, "Memoria sobre la zona minera Linares-La Carolina," *Revista minera, metalurgia y de ingeniería* (agosto 1889-diciembre 1890) 323-24; R. Contreras de la Paz, *Síntesis histórica de Cástulo* (Madrid 1971); J. Mangas, "El trabajo en las minas de la Hispania romana," in S. Castillo (coord.), *El trabajo a través de la historia. Actas IIº Congreso Asoc. Hist. Social*. 1995 (Córdoba 1996) 45-59; F. Gutiérrez Guzmán, *Las minas de Linares: apuntes históricos* (Linares 1999) 303-4.
- 20 H. Sandars, "Apuntes sobre la apellidada "Mina de la Plata" próxima a Baeza, en la provincia de Jaén," *BolRAcadHist* 85 (1924) 123-45; M^a E. Conde Guerri, *La ciudad de Carthago Nova: la documentación literaria* (Murcia 2003).
- 21 C. González, A. M^a Adroher and A. López, "El Cardal (Ferreira), una explotación minera de los siglos III y II a.C. en las laderas septentrionales de Sierra Nevada (Granada)," *Florentia Iliberritana* 12 (2001) 199-220.

this type of production we can highlight the enormous potential of the Guadalquivir valley and the areas of the *campiñas* and Loma de Úbeda. A supply of grain would have been indispensable for the large numbers of troops and may well have placed considerable economic strain on the indigenous Iberian communities and their entire storage and redistribution system, as well as on their own cycles of production.²²

Baecula and Hasdrubal Barca

In contrast to relatively frequent sieges and the capture of towns (Carthago Nova, Castulo, Iliturgi, Orongis), in the last phase of the war on the Iberian peninsula there were fewer pitched battles. We know of two examples of the latter, at Baecula and Ilipa, which resulted in major confrontations between opposing armies. Baecula took place only a year after the taking of Carthago Nova. It pitted Hasdrubal Barca, commander of one of the Carthaginian armies stationed in the peninsula, against Scipio the Younger. As Y. Le Bohec says, it was a battle in which the Carthaginians lost their position but saved almost their entire army.²³ Polybius (10.38.7-10, 10.39-40) and Livy (27.18-20.1-8) tell of a battle in which the Roman army attacked the Carthaginians who had taken a defensive position on a flat-topped hill, arranged in terraces and completely surrounded by a precipitous drop. The Romans' offensive manoeuvre culminated in a pincer movement that surrounded the Carthaginian army on the top of the hill, but Hasdrubal had already escaped with most of his army, elephants and military *chremata*. This has been interpreted as a planned withdrawal, a hard-fought rearguard delaying action²⁴ in which the Carthaginian army would not have suffered any significant losses.²⁵ In this way, Scipio won a twofold victory. First, in the general context of the Second Punic War, Baecula would result in Hasdrubal relocating to Italy (we do not know if this had been planned beforehand). Second, it opened the way for territorial control of the valley, which would subsequently be accomplished through the Castulo treaties, the taking of Orongis and Iliturgi, and the defection of Ilipa.

To be more specific, with respect to the outcome of the battle itself Scipio did not succeed in preventing Hasdrubal's escape — he was in a difficult situation in that he did not know the positions of the other two Carthaginian armies. These aspects, we believe, are reflected in the archaeological data, particularly in the situation of the camps and the linear distribution of the finds. The distance between camps A and C (Carthaginian and Roman, respectively) during the battle, which have been located and documented archaeologically, is more than 5 km as the crow flies, and a march of some 8 km based on the trail of *clavi* found. For a consular army this would have been about a two-hour march, providing it did not encounter any opposition on the ground or an enemy positioned on one of the terraces,

22 There are settlement systems that could attest to a capacity to intensify agricultural production in the 2nd c. B.C., as is the case of the Giribaile area: L. M^a Gutiérrez, *El oppidum de Giribaile* (Jaén 2002) 114.

23 Y. Le Bohec, *Histoire militaire des guerres puniques* (Paris 1996) 130.

24 F. Quesada, "Baecula: ¿batalla campal importante o acción de retaguardia reñida?," *Desperta Ferro Antigua y Medieval* 17 (2013) 22-26; F. Quesada, "La batalla de Baecula en el contexto de los ejércitos, la táctica y la estrategia de mediados de la Segunda Guerra Púnica: una acción de retaguardia reñida," in Bellón *et al.* 2015 (supra n.1) 589-608. Polybius makes various references to this situation. In narrating the outcome of the battle itself, he writes: "Hasdrubal, as had been his original intention, when he saw his troops giving way and in disorder, declined to fight it out to the death [...]" (10.39.7-8, having previously foreseen it (10.37.5).

25 Polyb. 10.38.7-10, 10.39 and 10.40; Liv. 27.18-20.1-8.

as described by the sources.²⁶ We believe that this distance was decisive for the outcome of the battle as it gave Hasdrubal the space and time he needed to opt for the planned escape manoeuvre as soon as he observed the slightest intent on Scipio's part to mount an attack (fig. 2 in colour). This fundamental aspect can also be detected archaeologically through evidence of a possible pincer movement carried out by the Roman army on the peak of Cerro de las Albahacas. This perhaps demonstrates their intent not to allow that part of the Carthaginian/allied army actually facing the Roman attack to escape. A. Domínguez Monedero has recently pointed out certain internal contradictions in Polybius' and Livy's narratives of the battle.²⁷ Among other aspects, these are reflected in the supposed disorder of the Carthaginian army at the end of the battle, once they had been overcome by the Romans. Its disorder perhaps reflects a situation in which the combat positions were defined in the first part of the battle, and not in its final outcome.²⁸ It is clear that it would have been impossible to flee from such a compromised position without having a considerable margin of time.

Our attention is also drawn to the similarity between this scene's general composition and Numistro (Muro Lucano, Basilicata), another battle in this conflict. According to our archaeological analysis,²⁹ the armies were in similar positions in that battle fought between Marcus Claudius Marcellus and Hannibal in the Lucanian Apennines in 210. The Roman army was on a plain, at a lower altitude than the Carthaginians whose camp was in a defensive position in a rugged area on a hill, and also close to possible exit routes which proved decisive for their retreat after the first day of battle. Precisely in the context of this battle, Sextus Julius Frontinus tells of the importance of choosing the camp's position (*De loco ad pugnam eligendo*); he even awards victory to the Carthaginian general based on the strategy at Numistro.³⁰

The historiographic debate about Baecula

Questions about the location of Baecula have been debated for a long time, but there is still no agreement about the actual site of the battle. The discussions have mainly revolved around the study of the ancient sources and the homophonic similarity of the two place-names: Baecula = Bailén.³¹ The German school has contributed the most (sometimes in an uncritical manner) to sustaining the identification of Baecula with Bailén, while at the same time contributing to a tradition that in our own day clashes with local ideas of identity. A. Schulten highlighted his excavations at Numantia and Ampurias, recognizing that his hypothesis regarding the location of the battle of Baecula had been "a lesser investigation"³² compared to those that had brought him international prestige.³³

26 Taking as reference the period of Vegetius (*De re mil.* 1.9): see J. Thorne, "Battle, tactics, and the emergence of the *limites* in the West," in P. Erdkamp (ed.), *A companion to the Roman army* (Oxford 2007) 218-34.

27 A. Domínguez Monedero, "Los autores antiguos y la Segunda Guerra Púnica: una visión sesgada," in Bellón *et al.* 2015 (supra n.1) 40-52.

28 Livy (27.18.16) speaks of the 'decomposition of the front'.

29 J. P. Bellón *et al.*, "Numistro. De loco ad pugnam eligendo," *SIRIS (Matera)* 13 (2013) 91-115.

30 *Strateg.* 2.2.6: *Hannibal apud Numistronem contra Marcellum pugnaturus cavas et praeruptas vias obiecit a latere, ipsaque loci natura pro munimentis usus clarissimum ducem vicit.*

31 Bellón *et al.* (supra n.6) 11-66.

32 A. Schulten, *Fontes Hispaniae Antiquae* III. *Las guerras de 237-154 a de J.C.* (Barcelona 1935) 33-35.

33 Id., *Cincuenta y cinco años de investigación en España* (Reus 1953) 63.

He boasted (as he had every right to do) of his knowledge of the sources and his “good topographic eye” when it came to identifying the specific places referred to in the texts, whereas L. Pericot, one of the most important prehistorians in 20th-c. Spain, attributed that virtue to “his magic wand”, an assessment that offended Schulten, who repeated it in the reports. It is proposals such as this, undoubtedly based on a scientific methodology, that served to lay the foundations for and support the identification of present-day Bailén with the ancient *Baeculam urbem* mentioned by Polybius and Livy. However, except in German historiography there is no agreement about the location in Bailén — and even in that tradition there are some exceptions.³⁴ W. Brewitz noted the local tradition that placed Baecula in the area of that town³⁵ and it was subsequently consecrated as fact in J. Kromayer and G. Veith’s magnificent atlases³⁶ thanks to information received directly from General Lammerer and Schulten.³⁷ In any case, because of the maps available to foreigners in the early 20th c., Brewitz’s proposals were tied to the town’s location in the area of Castulo,³⁸ and with an imbalance that depicted a battle taking place over dozens of square kilometres in the whole area between the Guadalimar valley and the river Rumbiar (some 20 km), while Castulo was placed south of the Guadalimar, on its left bank (fig. 3, colour). It was in this context that Schulten found himself collecting and writing up information to compile the *Fontes Hispaniae Antiquae*. He indicates that he visited the area with General Lammerer to confirm his proposed location for the battle of Baecula “on the ground”.³⁹ However, as F. Quesada has pointed out,⁴⁰ this proposal suffered from important internal contradictions with regard to the information provided by the sources. In other words, one could excuse the lack of archaeological data but not Schulten’s contradictory philological conclusions⁴¹

34 In the *RE* 1896, Bd. II.2, 2743, E. Hübner said its location was unknown.

35 W. Brewitz, *Scipio maior in Spanien* (Tübingen 1914) 60–61.

36 J. Kromayer and G. Veith, *Schlachten-Atlas zur antiken Kriegsgeschichte* (Leipzig 1922) vol. 1, 31–33.

37 Ibid. 31: “... ergänzt durch eine noch nicht publizierte Aufnahme des General Lammerer, der mit Prof. Schulten zusammen das Gelände an Ort und Stelle untersucht hat”. Other modern authors follow this line. A. M. Canto (“La batalla de Baecula no pudo ser en Santo Tomé,” *Revista Municipal Ayuntamiento de Bailén* [julio 2011] 50–53) also continues to defend the thesis that Baecula was in the area of Bailén (Jaén), forgetting such basic aspects as the archaeological remains from the late 3rd c. B.C. in that town and its immediate surroundings.

38 As Domínguez Monedero has recently shown (*supra* n.27) 42–43, the question of the location of Baecula near Castulo is based on relative appraisals; in other words, they need to be qualified in terms of their scale. Our proposal is based on the consideration that the *oppidum* of Los Turruñuelos, in the area of which we found remains of the battle, is in fact within the territorial orbit of Castulo, considering the rôle played by that town in the 4th–3rd c. B.C. in a local process of aggregation and territorial ascendancy prior to the outbreak of the Punic War: see Ruiz *et al.* 2013 (*supra* n.8).

39 Schulten (*supra* n.32) 122.

40 F. Quesada, “Romanos, cartagineses e hispanos en la batalla de Baecula,” in *II Jornadas de Estudios Históricos. La batalla de Baecula* (Jaén 1999) 46–70.

41 Schulten has been the subject of several historiographic reviews — e.g., G. Cruz Andreotti, “Un acercamiento historiográfico al Tartessos de Schulten,” *Baetica* 10 (1987) 227–40; F. Wulff (ed.), *Adolf Schulten: “Historia de Numancia”* (Pamplona 2004) — that stress his extensive knowledge of the classical sources and his philological method, which are vouched for by his campaigns in Numantia and his research on Tartessos (M. Álvarez Martí-Aguilar, *Tarteso. La construcción de un mito en la historiografía española* [Málaga 2005]). His prestige derived from an uncritical acceptance of his proposals, which went on to be included in broader works of dissemination.

in placing the river (the Guadiel) between the two armies, in the middle of the battlefield or, alternatively, in forcing the Roman army to cross it before reaching the enemy's lines.

We do not wish to spend time on those aspects that have already been dealt with in more detail in our other studies,⁴² and simply refer to the existence of alternative historiographic proposals for the site of the battle of Baecula, such as Úbeda la Vieja, Vilches or Baeza,⁴³ also in the Alto Guadalquivir or, more recently, the Campiña de Jaén, south of the Guadalquivir and west of the Guadalbullón river.⁴⁴

Methodological framework

Archaeological excavations carried out on Cerro de las Albahacas between 2006 and 2014 have allowed us to document three encampment areas. These areas seem to concentrate distinct contexts and functions, ranging from what can be defined as a stockade delimiting what we have identified as the Carthaginian camp (Camp A) to the corroboration of a military establishment on the hill known as Cerro de las Albahacas in a zone we interpret as the possible camp on its summit built or re-occupied by the Roman army after the battle. We have also documented the Roman camp from which the attack was launched; this we found by retracing the movements of the army using the evidence provided by a series of finds such as *clavi caligae* (fig. 2).

In Spain recently there has been a change in the methodology for investigating this type of battle setting thanks to the innovations contributed by field archaeology.⁴⁵ Yet the data that can be correlated specifically to the Second Punic War are still few and far between. In this respect the studies carried out by J. Noguera and his team in the Ebro Delta⁴⁶ are

42 Bellón *et al.* 2009 (supra n.1) 21; iid. 2014 (supra n.1); iid. 2015 (supra n.1).

43 *Tabula Imperii Romani J-30, Col. Salaria, Viatic, Baesucci* (Madrid 2000).

44 R. Corzo, "La Segunda Guerra Púnica en la Bética," *Habis* 6 (1975) 213-40.

45 F. Quesada, *El armamento ibérico: estudio tipológico, geográfico, funcional, social y simbólico de las armas en la cultura ibérica (siglos VI-I a.C.)* (Monog. Instrumentum 3; 1997); id., "La guerra en las comunidades ibéricas (c.237-c.195 a.C.): un modelo interpretativo," in A. Morillo, F. Cadiou and D. Hourcade (coords.), *Defensa y territorio en Hispania de los Escipiones a Augusto* (Madrid 2003) 101-56; F. Gracia Alonso, *La guerra en la protohistoria* (Barcelona 2003); A. Morillo (coord.), *Arqueología militar romana en Hispania* (Anejos de Gladius 5; 2002); id., "Los establecimientos militares temporales: conquista y defensa del territorio en la Hispania republicana," in Morillo, Cadiou and Hourcade *ibid.* 41-80; A. Morillo (ed.), *Arqueología militar en Hispania. Producción y abastecimiento en el ámbito militar* (León 2006); A. Morillo and J. Aurrecoechea (edd.), *The Roman army in Hispania: an archaeological guide* (León 2006); P. Moret and F. Quesada (edd.), *La guerra en el mundo ibérico y celtibérico (ss. VI-II a.C.)* (Madrid 2002); F. Cadiou and M. Navarro, "Qu'est-ce qu'une trace de guerre?: Éléments de réflexion pour un programme de recherche," *Saldvie* 8 (2008) 13-20; Cadiou and Navarro (supra n.1); F. Sala and J. Moratalla, *Las guerras civiles romanas en Hispania: una revisión histórica desde la Contestania* (Alicante 2014); M^a P. García-Bellido, *Las legiones hispánicas en Germania. Moneda y ejército* (Anejos de Gladius 6; 2004); M. Martín-Bueno, "La guerra y la arqueología: carencias y evidencias," *Saldvie* 8 (2008) 9-12.

46 J. Noguera, "Los inicios de la conquista romana en Iberia. Los campamentos de campaña del curso inferior del río Ebro," *AEspArq* 81 (2008) 31-48; id., "Los campamentos romanos en el curso inferior del río Ebro durante la Segunda Guerra Púnica," in *Limes XX* (supra n.1) 329-38; id. *et al.*, "The beginnings of Rome's conquest of Hispania: archaeological evidence for the assault on and destruction of the Iberian town Castellet de Banyoles," *JRA* 27 (2014) 61-81; E. Ble *et al.*, "La Palma: un campamento de Publio Cornelio Escipión 'Africano' durante la Segunda Guerra Púnica en Iberia," *Ex-novo. Revista d'Historia i Humanitats* 7 (2011) 105-32.

paradigmatic; their findings constitute the first archaeological evidence on the peninsula relating to the course and outcome of the Second Punic War to have been studied systematically.

As has been seen in other contexts (not limited to the Second Punic War) with a longer temporal range, campaign camps (*castra aestiva*) were temporary rather than stable structures and have left only a fragile archaeological record. Often they are also difficult to document⁴⁷ due, amongst other factors, to the lack of superimposed remains and more or less stable architectural structures. Nevertheless, as A. Morillo correctly pointed out, there is no direct correlation between the presence of stone structures and their interpretation as a campaign camp.⁴⁸ As F. Quesada has pointed out,⁴⁹ in this context we must insist on the peculiarity of the archaeological contexts presented: they are to be treated as anomalies when compared to the usual settlement types that are becoming increasingly well known. The methodological advances currently being made in Spain are of prime importance for identifying and recording this type of context which results from a short-lived occupation. In our case we are talking about a period of just a few days in which camps were set up (prior to the battle), the battle was fought (which implies the presence in the camp of the material needed for that event), and the subsequent use and abandonment of the Roman camp in an area that had been the battlefield. Our challenge is to discern stratigraphically the sequences relating to a particular day (there are no radiocarbon or isotope dating possibilities that could allow us to establish the day-by-day sequence; we have only the interpretation of the documented contexts to guide us).

Despite the transitory nature of this type of structure, several examples have recently been published. They include those of El Pedrosillo and Santo de Valdetorres of the Republican era,⁵⁰ while from a later period, linked to the conquest of the NE part of the peninsula,⁵¹ there are even defensive structures associated with battlefields, as in the case of Andagoste.⁵² To these we can add the above-mentioned camp of La Palma (L'Aldea) and that of Camí del Castellet de Banyoles (Tivissa), both in Tarragona,⁵³ where systematic

47 Morillo 2003 (supra n.45); Á. Morillo, "Criterios arqueológicos de identificación de los campamentos romanos en Hispania," *Salduie* 8 (2008) 73-93; S. Kaye, *Roman marching camps in Britain: GIS, statistical analysis and hydrological examination of known marching camps, resulting in the prediction of possible camp sites* (2013), available at www.bandaarcgeophysics.co.uk/arch/roman-marching-camps-uk.pdf

48 Á. Morillo, "Campamentos y fortificaciones tardorrepúblicas en Hispania. 'Calibrando' a Sertorio," in Sala and Moratalla (supra n.45) 36.

49 F. Quesada, "La arqueología de los campos de batalla. Notas para un estado de la cuestión y una guía de investigación," *Salduie. Estudios de Prehistoria y Arqueología* 8 (2008) 21-35.

50 J. G. Gorges and F. G. Rodríguez, "Un probable complejo militar romano de época republicana en la Beturia Túrdula: notas preliminares sobre el campamento del "Pedrosillo" (Casas de Reina, Badajoz)," in Á. Morillo (ed.), *Arqueología militar romana en Hispania. Producción y abastecimiento en el ámbito militar* (León 2006) vol. 2, 655-70; J. G. Gorges et al., "Le campement romano-républicain du 'Pedrosillo' (Casas de la Reina, Badajoz, Espagne) à l'épreuve des sondages," in *Limes XX* (supra n.1) 267-80; F. J. Heras, "El Santo de Valdetorres (Badajoz, España). Un nuevo enclave militar romano en la línea del Guadiana," *ibid.* 315-28.

51 A. Martínez, "Campamentos romanos de campaña en el extremo oriental del Cantábrico," in *Limes XX* (supra n.1) 365-74.

52 M. Unzueta and J. A. Ocharán, "El campo de batalla de Andagoste (Álava). Aproximación a la conquista romana en el Cantábrico Oriental," in M^a P. García-Bellido (coord.), *Los campamentos romanos en Hispania* (27 aC.-192 dC.). *El abastecimiento de moneda* (Madrid 2006) 473-91.

53 Noguera 2008 (supra n.46); *id.* 2009 (supra n.1); *id. et al.* 2014 (supra n.46).

surveys and samplings have provided a homogeneous collection of finds, which include indigenous and imported pottery linked to coin hoards, and other elements such as sling bullets and the remains of *impedimenta* or *militaria* (*fibulae*, *clavi*, etc.), that define their contexts. The former site has been interpreted as the *Nova Classis* mentioned by Livy in the framework of the Second Punic War in the year 217, and the finds from there are similar to those made on the Cerro de la Albahacas as part of our project.⁵⁴

The archaeological analyses question the idealized and standardized models much debated by specialized historiography. The new archaeological evidence has revitalized the debate on how to deal with the classical sources and on the potential for using those for comparison with archaeological methodology.⁵⁵ In the present case, it is the German school, from Mommsen to Schulten (with the exception of Hübner), that has been the most insistent (and perhaps the least critical) in ‘setting in stone’ a philological paradigm that is based on the descriptions in both Polybius and Livy who clearly state that there were four camps. The same sources also tell us of some of the response tactics that each army took in its own strategic interests, such as the defensive position chosen by Hasdrubal when compared to the decidedly offensive position taken by Scipio. This fact was decisive when it came to locating the site as proposed by the German scholars,⁵⁶ but their proposals either have problems of scale (e.g., those of Kromayer and Veith) or they contradict the reading of the sources (as in the case of Schulten, who places the river in front of the Carthaginian camp, in the middle of the battlefield).

Archaeological analysis has introduced to the discussion multiple factors, including the strategic position of the battlefield, the topography, and the availability of water. All these elements taken together are decisive for the subsequent tactical development of the battle. The choice of battlefield determined the location of the camps. Although camps are not normally direct ‘participants’ in a battle, since no fighting takes place in them, they are a fundamental part of it given that they determine the structure of the event and the possible final outcome.⁵⁷ In the battles of Baecula and Numistro⁵⁸ there is a certain similarity in the strategy adopted by the Barca brothers, Hannibal and Hasdrubal, for their positions were less a defensive strategy than a tactical planning of their own movements depending upon the outcome. At Baecula, however, as Quesada has pointed out, the planning of Hasdrubal’s retreat was more complicated, given that it must have taken place after the battle had already begun: withdrawing a whole army in an orderly manner and saving the treasure and the elephants must have been anticipated and pre-planned.⁵⁹

Our investigation consisted of archaeological surface surveying and sampling along transects in the area of the summit of Cerro de las Albahacas and practically the whole of its S slope. In addition to collecting surface finds (mainly pottery), a metal detector

54 Ble *et al.* 2011 (supra n.46) 125-28.

55 Basically in Polybius (6.19.1-6.42.6). On the classical sources for castrametation in the Iberian peninsula, see A. Morillo, “Campamentos romanos en España a través de los textos clásicos,” *Espacio, tiempo y forma*, ser. II, Historia Antigua 6, 379-98.

56 Kromayer and Veith (supra n.36); Brewith (supra n.35) 60; Schulten (supra n.32) 122.

57 M. Dobson, “No holiday camp. The Roman Republican army camp as a fine-tuned instrument of war,” in J. DeRose (ed.), *A companion to the archaeology of the Roman Republic* (Malden MA 2013) 214-34.

58 Bellón *et al.* 2013 (supra n.29).

59 Quesada 2013 (supra n.24) 22-26; id. 2015 (supra n.24).

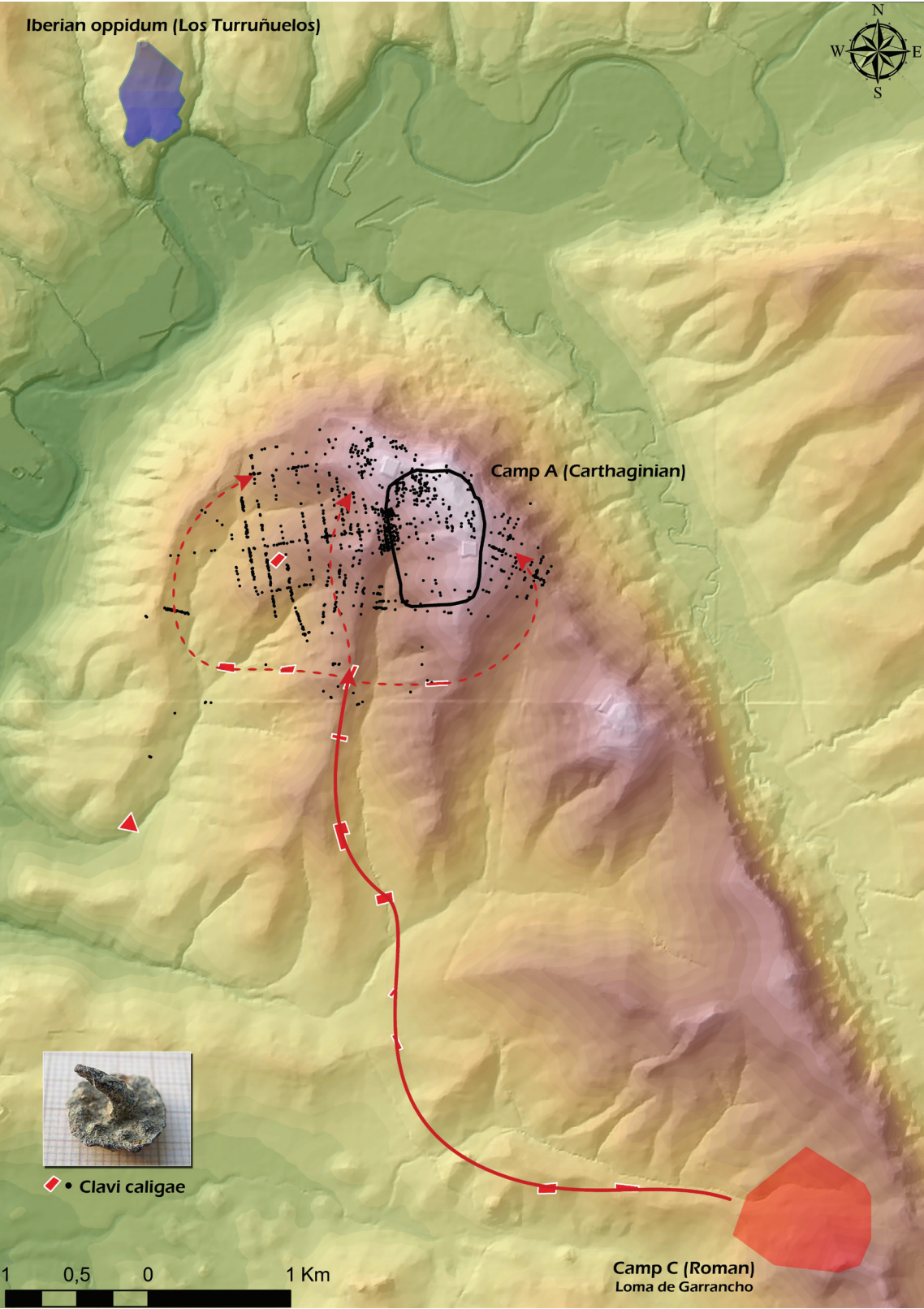
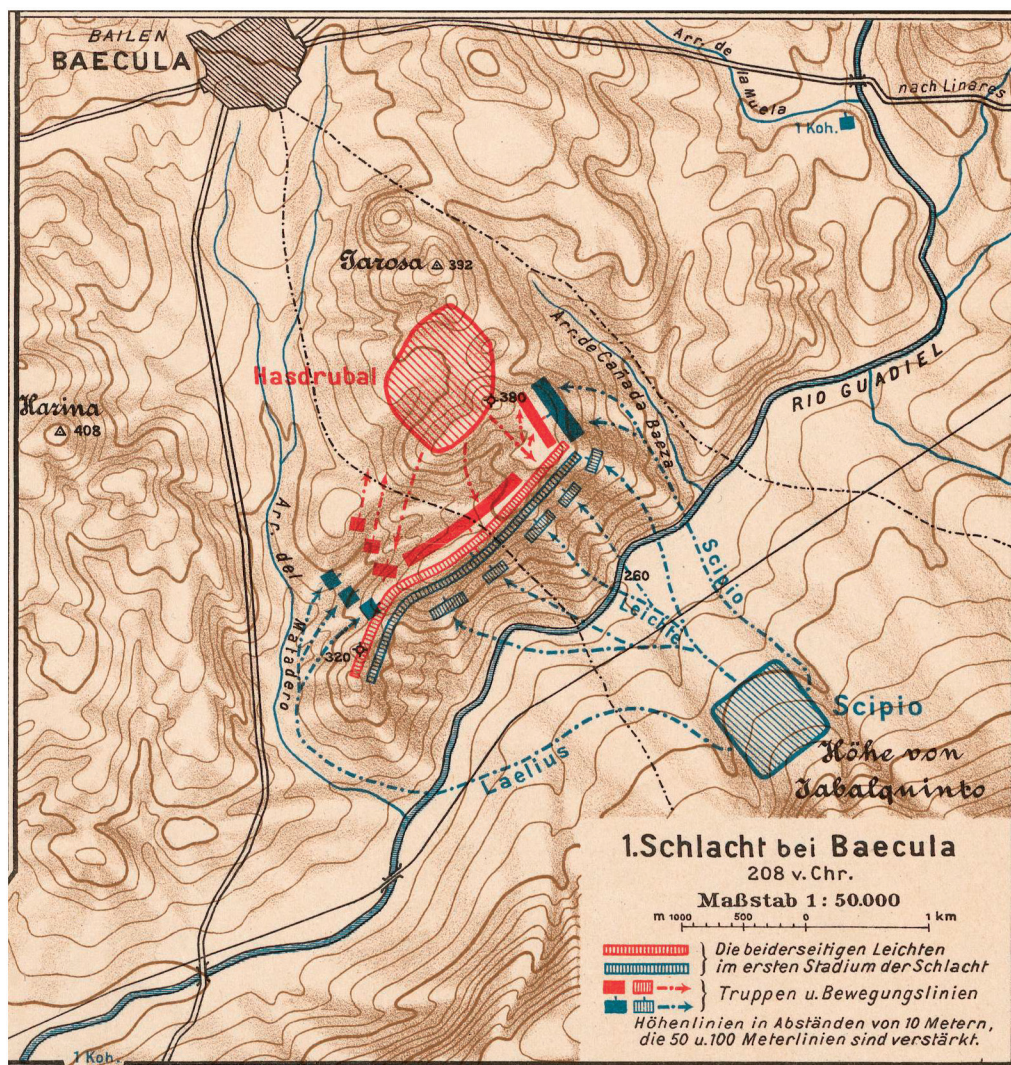


Fig. 2. The battlefield of Baecula (208 B.C.).



Kromayer and Veith, 1922

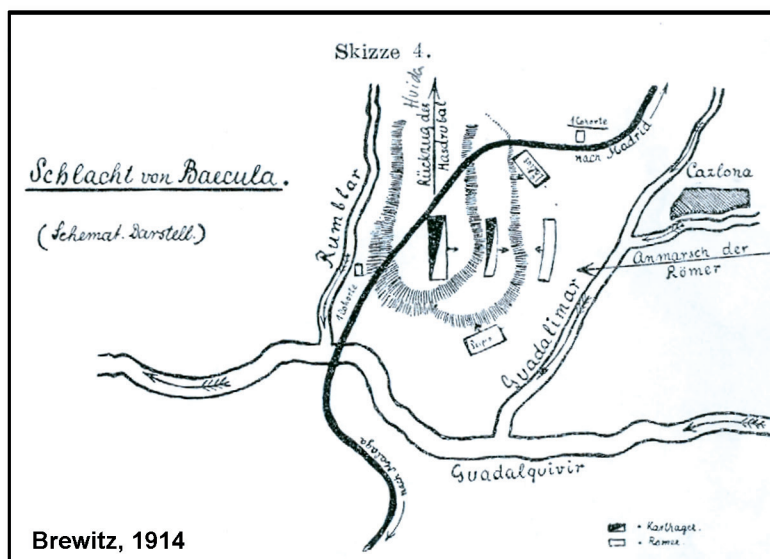
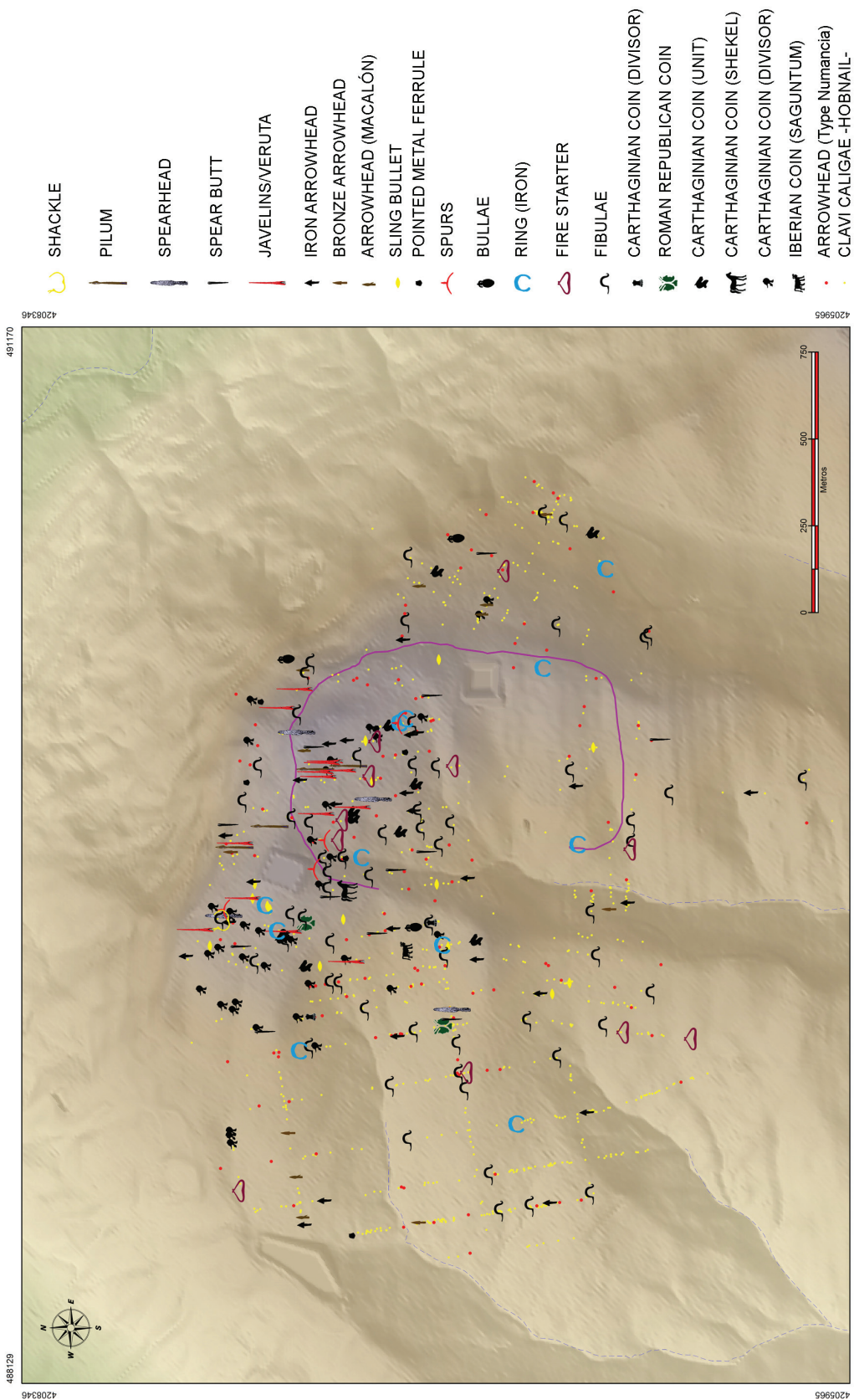


Fig. 3. The location of Baecula as proposed by Kromayer and Veith (1922) and by Brewitz (1914).



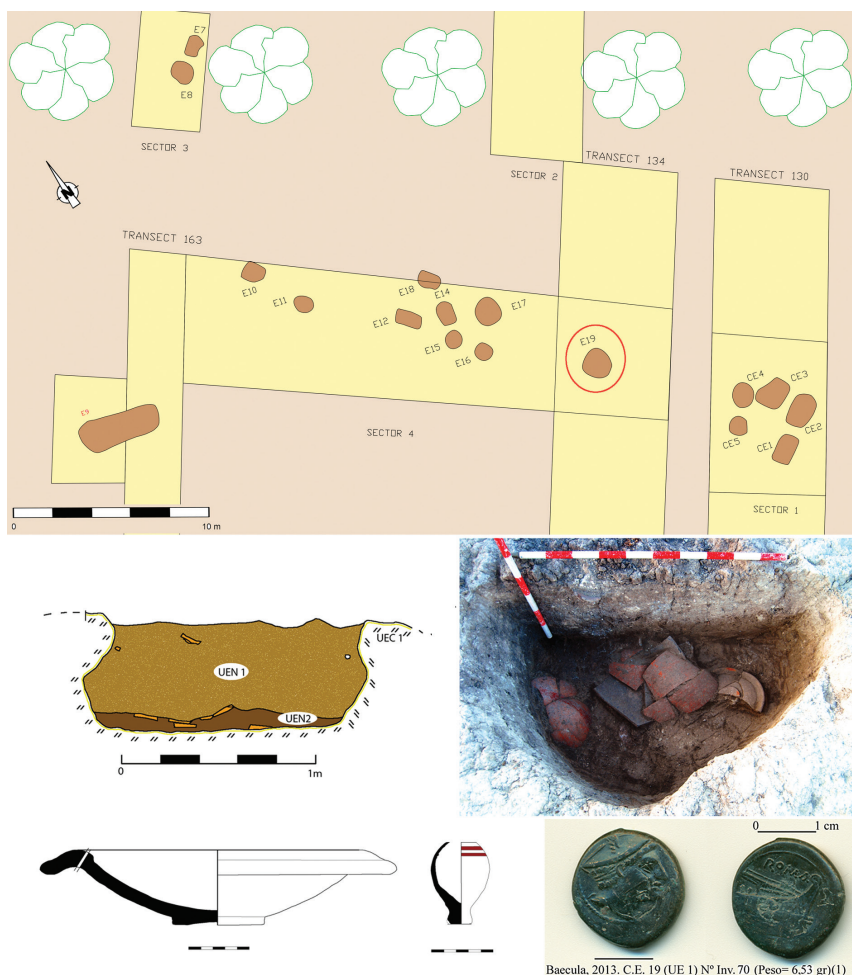


Fig. 15. Stratigraphy and imported finds from Pit 19. Carthaginian plate/mortar and ointment container (*unguentarium*) and a Roman semi-libral as (*RRC 38/7*)



Fig. 16b. Strategic control of Cerro de las Albahacas over the Guadalquivir valley, view to the northwest. The arrow indicates the position of the *oppidum* of Los Turruñuelos (*Baeculam urbem?*)

was used. Information from both was loaded into a Geographic Information System (GIS) that allowed us to manage the huge amount of data collected.⁶⁰ To this survey system trial trenches were added to check for any stratigraphy, confirm and document the camp structures, and search for any evidence of structures within. Geoelectrical, georadar and geomagnetic analyses⁶¹ were carried out in specific areas to check for the presence or absence of structures; this helped us to decide whether to extend the excavations.

The sampling along 196 transects covered an area of 582,479 m² (58.24 ha), roughly the equivalent of the whole of the ancient settlement of *Castulo* (fig. 4). Bearing in mind the total size of the battlefield, which, to judge from the dispersion of finds, we currently believe to have been c.400 ha, the sampling covered 14.56% of the whole, although we do not see it as a homogeneous extension of finds displaying a constant density but as a discontinuous scatter, with more important concentrations falling in certain parts of the battlefield. After 10 years of systematic campaigns we have documented more than 9,200 items. The process of analysing them is complex and only those that can definitely be associated with the battlefield (e.g., weapons, coins, *militaria*) have been taken into account; we have left out those (nails, tips, amorphous materials) that are difficult to link directly with a specific part of the event (fig. 5 in colour).

As we have argued elsewhere,⁶² the assemblage of weapons and *impedimenta* found during the surveys and excavations at Cerro de las Albahacas is consistent with a battle scenario taking place during the final stages of the Second Punic War. We can corroborate this from our knowledge of the types of weapons used and from their distribution in spatial patterns that correlate directly with the dispersion of Hispano-Carthaginian, Roman and Saguntine coins dating to the late 3rd c. Although the dispersion patterns have been skewed by the normal processes of cleaning up and spoliation after a battle, certain types of objects can be attributed to the different combatants: to the Romans, Talamonaccio-type *pila* and *caligae* hobnails; to the Balearic slingers, sling bullets; to the Carthaginians, bronze tips with haft sockets; and to the Hispanic fighters, spurs. Other types of weapons, however, such as *veruta*, spears, javelins and chapes, could have been used by either Iberians, Romans or Africans, if we keep in mind the interchanging, re-use, spoliation and stock-piling of weapons of different origins during a prolonged conflict that involved military contingents of very diverse origins (fig. 6). Although we are still in the process of analysing the dispersion of the georeferenced finds recorded on the GIS, specific scatters can be attributed to certain contingents of the Roman and/or Carthaginian armies. For example, tent pegs are restricted to the camp zones. Certain types of arrowhead are concentrated on the E and W flanks of the battlefield; finally, the sling bullets tell us of the movements of the Balearic slingers. In general, the battlefield offers a homogeneous distribution of finds, although their distribution needs to be analysed in greater depth. In the camp areas, however, where the intensity of our sampling was greater, we can observe areas in which the

60 I. Cárdenas, F. Mozas and J. M. Valderrama, "Baecula battle Geographic Information System," in G. Concheri, R. Meneghello and G. Savio (edd.), *IMProVE 2011. Int. Conf. on Innovative Methods in Product Design. Proc., Abstracts* (Venice 2011) 920-25.

61 By J. A. Peña and T. Teixidó of the Andalusian Institute of Geophysics (Geophysics Dept., University of Granada).

62 F. Quesada *et al.*, "El armamento hallado en el campo de batalla de las Albahacas-Baecula," in Bellón *et al.* 2015 (supra n.1).

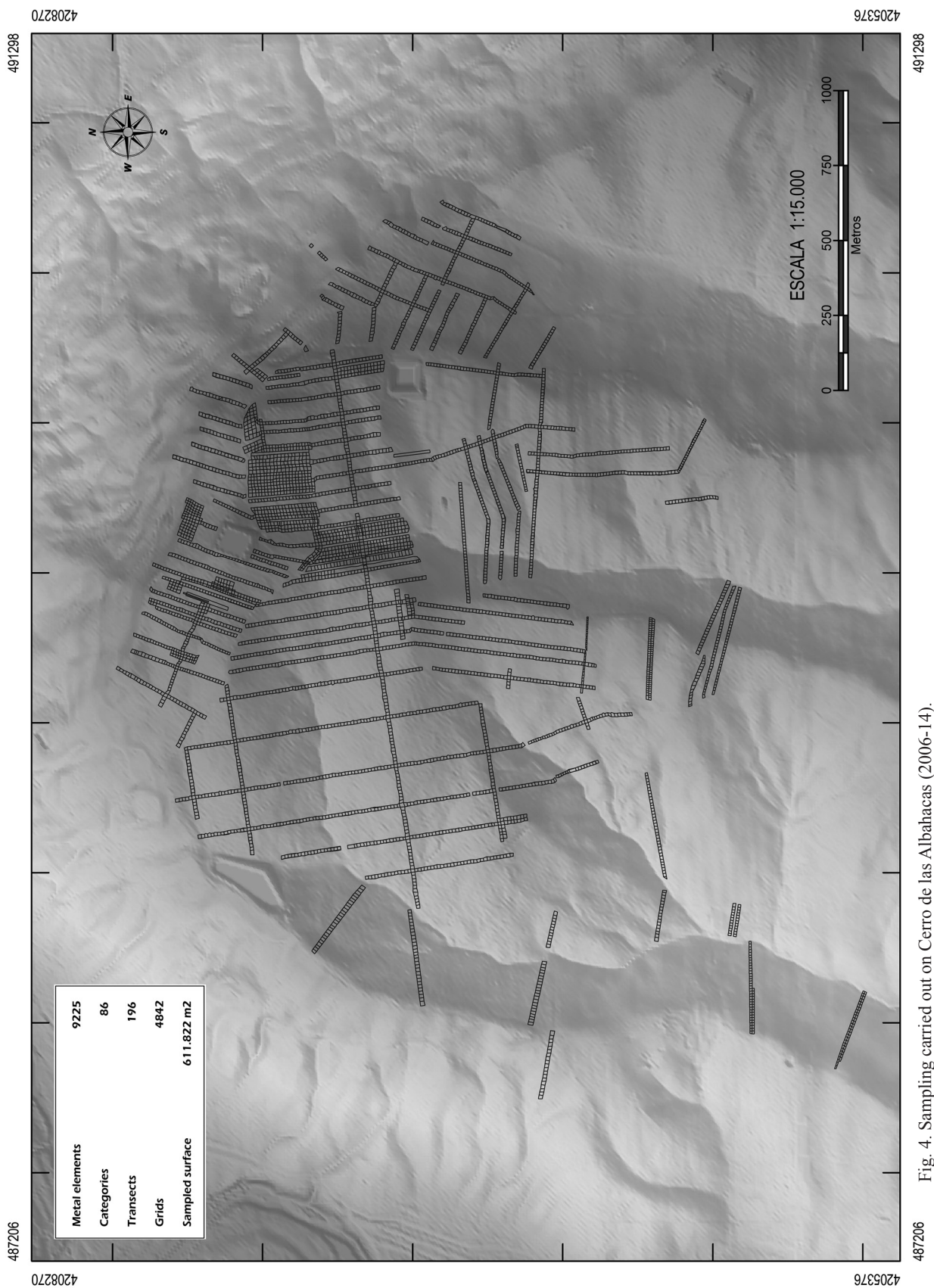


Fig. 4. Sampling carried out on Cerro de las Albahacas (2006-14).



Fig. 6. Camp A as seen in aerial photographs dating to 1956 and 2006 (same scale).

presence of groups of arms (*veruta*, spears, javelins) could well relate to the specific actions of attack groups during the battle.

We also have to keep in mind the absence of standard archaeological stratigraphy. We have regularly observed how the finds from our metal-detector survey are very close to the surface — an average of no more than 20 cm in depth — and deeper only in exceptional cases where there is a particularly large object. Then we have to consider the illegal activities of metal-detectorists, who normally search for non-ferrous metals (bronze, silver) while ignoring ferrous objects; as a result we were able to document barely 10 cm below the surface a Talamonaccio-type *pilum* more than 30 cm long.⁶³

It is in excavation of the camp areas that we have been able to locate a coherent sequence (see below). Indeed, the stratigraphy preserved in the camp areas is essential for reconstructing the sequence of the battle, as opposed to the situation taking place on the battlefield itself. On the battlefield there is a distinct loss of information from the original record.⁶⁴ Between the battle and today there have been too many cases of the withdrawal and loss of information. They range from the post-battle looting, focused on the search for metal and other elements to be recycled and re-used (booty taken by the victorious army), to the casual finds made continuously over more than 2000 years, down to the more serious cases of spoliation especially during the 1980s.

The dynamics of how the battle developed allow us to decipher the georeferenced data in such a way that we can interpret precise moments in its course. This can be seen in the distribution of coin finds and that of certain types of arms. Especially good results come from interpreting the dispersion of the *clavi caligae*. This has allowed us to reconstruct the route of attack by the Roman army. Meanwhile, as we have upheld, the recovery of 1146 *clavi* on a battlefield that can without doubt be attributed to the Second Punic War entails a new dating for this type of find.⁶⁵

The camps at Baecula: the archaeology of a battle scenario from the Second Punic War

The basic information available indicates that there were at least four camps. This unusual situation was brought about by a range of topographic and other details that are provided by the sources.

1. The first Carthaginian camp must have been in the area of the Iberian *oppidum* (*Baeculam urbem*). This is the only area that has not been identified archaeologically.⁶⁶ We start from the hypothesis that it was located in the surroundings of the site of Turruñuelos (see fig. 2), an Iberian *oppidum* occupying more than 20 ha.⁶⁷ It was probably on the plain of the Guadalquivir, which makes it difficult to locate due to regular flooding and the washing away of topsoil. We believe that F. Chaves' hypothesis on the location of this type of camp structure was correct.⁶⁸

⁶³ Ibid. 316, fig. 3.

⁶⁴ Ibid. fig. 1.

⁶⁵ Quesada *et al.* 2015 (*supra* n.62). There is no other archaeological site, road or other feature nearby that could explain the presence or absence of these elements in the area of the battlefield.

⁶⁶ Polyb. 10.38.8; Liv. 27.18.1-3.

⁶⁷ Bellón *et al.* 2015 (*supra* n.1).

⁶⁸ F. Chaves, "Los hallazgos numismáticos y el desarrollo de la Segunda Guerra Púnica en la Bética," *Latomus* 49 (1990) 613-22.

2. A second camp, again Carthaginian, was located in a defensive position, protected by a steep bank and a river on one of its sides. This is the camp that was attacked by the Romans. Details described by the sources include a stockade with various gates.⁶⁹
3. The first Roman camp is the one from which the troops would have set out to attack the defensive position of the Carthaginian camp.⁷⁰
4. A second Roman camp, established after the battle, was possibly a re-occupation and re-use of Carthaginian camp structures on the summit of Cerro de las Albahacas.⁷¹

At this point we must refer to how our investigation unfolded. The first evidence of a battlefield on Cerro de las Albahacas naturally led us to try and identify associated camp structures, which undoubtedly existed regardless of their correlation with the initial hypothesis identifying the site with Baecula. Different archaeological situations were encountered. These range from the strength of Camp A (which we identify as the Carthaginian camp) on the summit of Cerro de las Albahacas, to the dispersion of the finds at Camp C on Loma de Garrancho hill, for which we have no clear boundaries given that there are no topographic or geomorphological indicators nor any traces of structures. Therefore excavations were arranged to document the presence or absence of evidence at various points along the *agger* of the camp.

a) Camp A: the Carthaginian camp on the summit of Cerro de las Albahacas

Fundamental to the archaeological analysis of this context was aerial photography and detailed orthophotography at 1 : 1000, which was incorporated into the microspatial analysis of the surface samplings. The topographical resources prepared for this analysis were complemented by the analysis of older aerial photographs, from which we were able to make an initial study of the perceptible traces. American flight images of 1945/46 and 1956/57 show the preservation of a perimeter that has still survived except on its W side. Based on the natural topography, it shows division of the area into plots that at that time still respected and made use of the remains of the camp as a basis. This anomaly of artificial origin corresponded, as was subsequently confirmed, to the limits of an oval-shaped, irregular enclosure with its longest axis running N–S (940 m), and with a maximum width of c.630 m (i.e., about two-thirds of the longer axis), for a total area of c.55 ha (fig. 7). The particular size of this area may be based on a Punic cubit of 52.5 cm. A dozen such modules comes to c.6.30 m which, when multiplied by 100, gives the structure's maximum width in the form of a rectangle with rounded corners; the maximum longitudinal axis would then be 1800 cubits (c.945 m).⁷²

The archaeological excavation in this area was aimed at determining aspects related to the camp's design, morphology, and possible subsequent re-occupation or modification. For this purpose, a series of trial trenches (S1, S3, S5, S7) was planned to help define the camp's perimeter with the goal of finding the defensive structures, topographic traces that could be an indication of internal divisions (S2), and the overall stratigraphic characteristics of the area (S4 and S6)⁷³ (fig. 7). The results were generally positive, although we could

⁶⁹ Polyb. 10.38.8; Liv. 27.18.5–7.

⁷⁰ Polyb. 10.39.1–2; Liv. 27.18.4 and 7.

⁷¹ Polyb. 10.40.11; Liv. 27.19.2.

⁷² P. Barresi, *Metrológia punica* (Lugano 2007). We are grateful to I. Fumadó for the analysis.

⁷³ Dimensions of the trial trenches: S1 - 16 x 2 m; S2 - 2.5 x 2.5 m; S3 - 12 x 2 m; S4 - 2 x 2 m; S5 - 4 x 2 m; S6 - 2 x 2 m; S7 - 3 x 2 m.

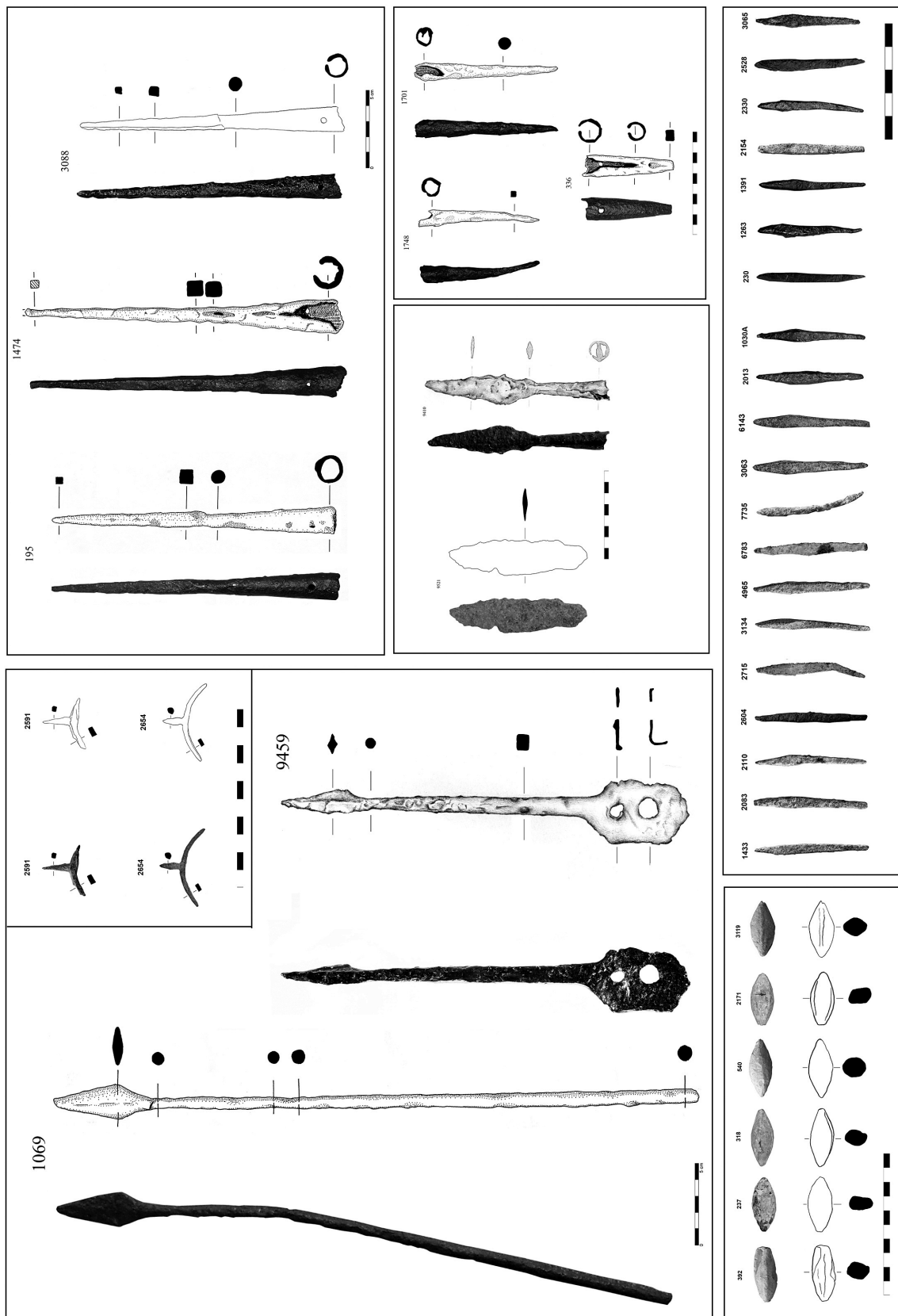


Fig. 7. Some examples of finds from the battlefield.

appreciate only roughly the form of the camp's *agger*, and we did not obtain any results documenting intact stratigraphic sequences in its interior that could be linked to the battle. On a structural level we came up against the limitations inherent in the state of the archaeological record; although the structure is well delimited on its N, E and S sides, erosion by two small E–W watercourses on the W side appears to have eliminated all traces.

One of the most noticeable aspects of this camp's defences is the different methods used to create the enclosure. Thus, at the far N end we documented a small embankment that had been created by digging out the geological base (clay) to accentuate the hillside's natural gradient — a quick and simple way of contributing to the definition of the defensive enclosure. We do not know whether on the highest part there would have been some kind of stockade, since erosion may have eliminated its traces. On the other hand, the topography presents a high slope that may have made it unnecessary to build a stockade in this area. By contrast, we found confirmation of traces (in negative form) of a stockade system on the enclosure's E side that appears somewhat more complex. We found the remains of postholes set at more or less regular intervals, *c.* 70 cm apart, just above the edge of the camp's *vallum*. In contrast, in the lower part of the *vallum* there are traces of a more heterogeneous orientation and arrangement, which may suggest the existence of an accumulation of branches and stakes aimed at reinforcing the defences of the stockade. The stratigraphic units documented in the trial trench, as well as the smaller adjacent trenches dug to ascertain whether or not a ditch had been dug in front of the stockade, show no other evidence that can be correlated with the battle episode, but we can highlight the shallowness of the deposits (to a maximum depth of 40 cm in the interior of the structure) (fig. 8).

The trial trenches thus point to a complex structure adapted to the natural topography and with different defensive solutions (mound and stockade), but we have not found any evidence of defensive trenches (at least where our tests were carried out). We have not documented any remains of structures in the interior of the camp, but the area in which trial trenches have been carried out is, of course, still insignificant in relation to the camp's total size of *c.* 55 ha. More systematic excavations would allow progress to be made in this respect.

b) Camp C: the Roman attack camp

From the very first archaeological sampling we began to see large amounts of certain materials resulting from the use of a metal-detector, amongst them abundant *clavi caligae*. These can be linked unquestionably to a battle and to the Roman army. Together with coins, arms and other finds that can be dated to the end of the 3rd c., they form part of a homogeneous and coherent record which cannot be associated with other kinds of explanations, such as a busy route (a Roman road) or a large settlement, neither of which is attested through surface sampling on Cerro de las Albahacas.⁷⁴ Interpreting the *clavi caligae* as indicators of troop movements led us to consider carrying out a survey sampling south of Cerro de las Albahacas with the aim of tracing the route followed by Scipio's army on its way to attack the summit of that hill. The procedure adopted consisted of carrying out random samplings on particular plots to note the presence or absence of that type of find.

⁷⁴ The loss of *clavi* is quantified by historical re-enactment groups and experimental studies: F. Himmler, "Testing the 'Ramshaw' boot: experimental calceology on the march," in L. Kocsis (edd.), *The enemies of Rome* (= *JRMES* 16, 2008) 347–57.

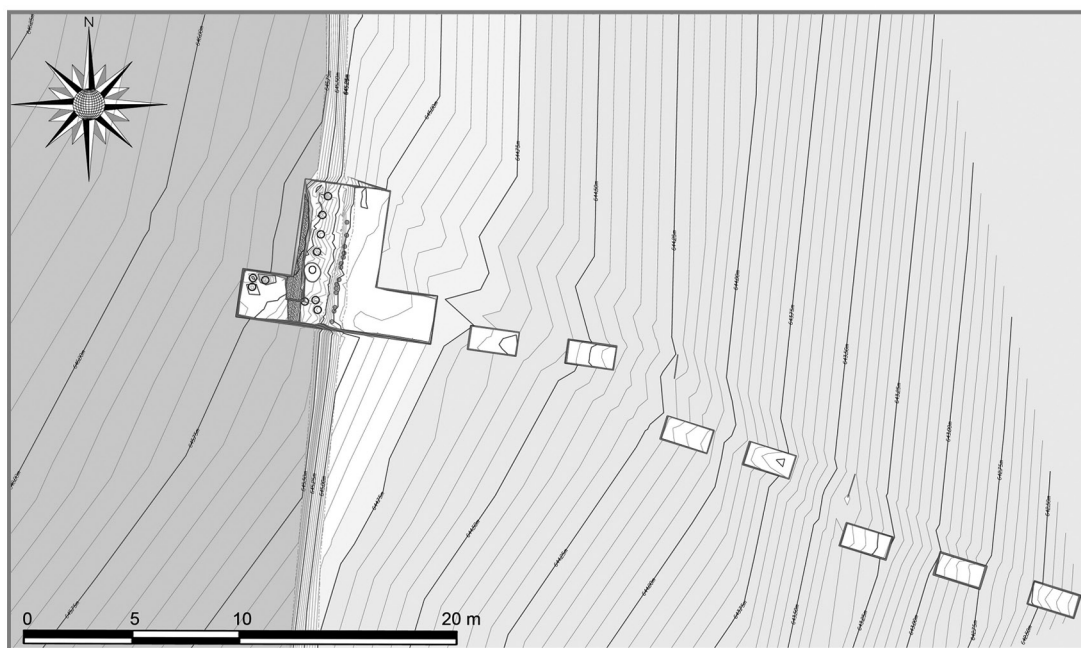
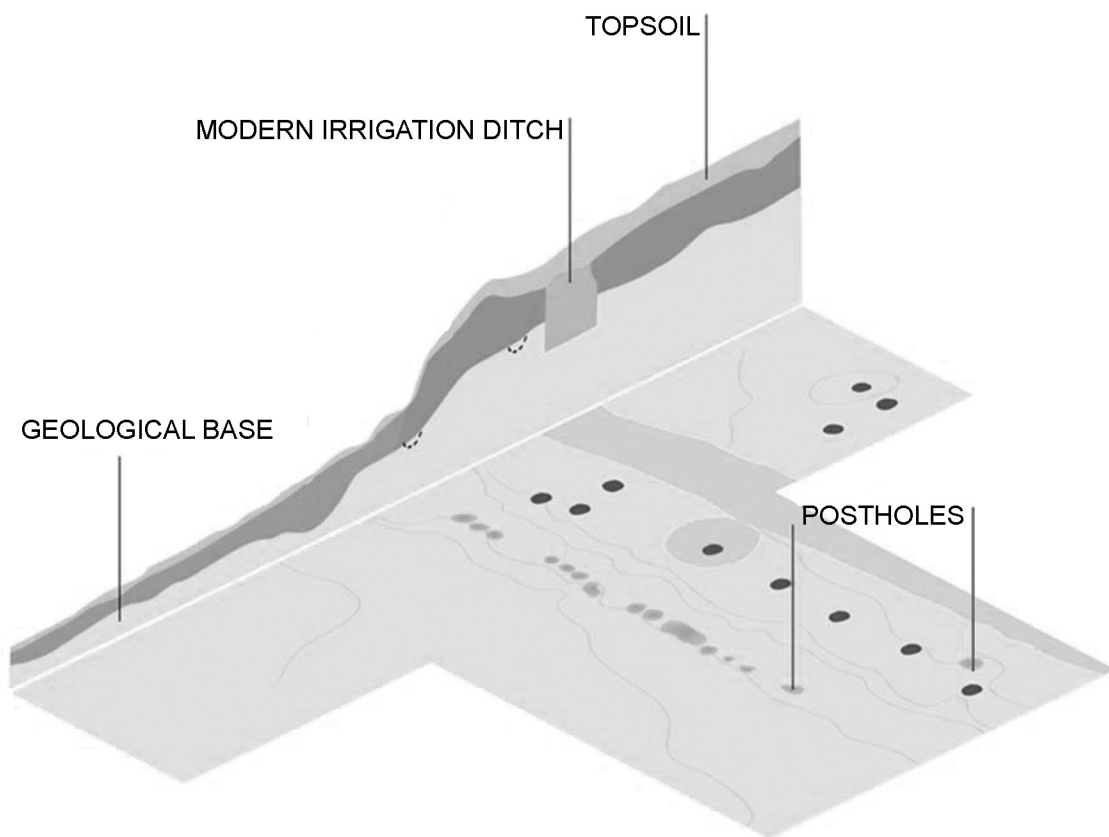


Fig. 8. Test Trench 3 in the Carthaginian camp (Camp A) revealing a palisade (postholes).

Not only were we able to determine the Roman army's route, but we were also guided to the location of its camp, at the site now known as Loma de Garrancho (see fig. 2). The application of GIS tools, such as the least-cost path,⁷⁵ when set against the archaeological evidence, confirms the validity of our hypothesis.⁷⁶ The samplings made in the area of Loma de Garrancho indicate the presence of a large assemblage of dispersed finds, amongst which a large number of hobnails, *fibulae*, cuirass pieces, tinder lighters, and so on stand out. This repeats the kind of finds from the zone in which the Roman camp would have been set up after the battle (see below), whereas no such finds were made in samplings carried out in the surroundings. In other words, these are spatially confined assemblages repeated in two parts of the battle site. By contrast, we have not documented any surface pottery that can be linked to the camp, which indicates a quite different context and situation from that of the camps on the summit of Cerro de las Albahacas.

We have also documented items linked to the army's attire and *impedimenta*, specifically several bronze *fibulae*, a *bullae*, and the remains of a cuirass clasp, all common finds in all the camp areas analysed. As far as the remains of weapons go, our small sample is made up entirely of projectile weapons, such as bronze and iron arrows, attributable to the triangular blade arrow type (characterised by the presence on its obverse of a raised rib running across the blade), or the type defined as a pyramidal-head point, identified as a catapult bolt.⁷⁷ To these we must add a large collection of iron bi-pyramidal arrowheads. Quite different are the various tent pegs found in the area, an exceptional discovery that strengthens the hypothesis that this was the site of the Roman camp.

Given that there are no structural remains or visible traces of such, the distribution of finds defines a large area of c.50 ha, but based on the placement of the various earth banks, and taking into account the distribution and concentration of the aforementioned finds, we can propose some limits (fig. 9). Morphologically, the resulting area reminds one of other Roman enclosures in the peninsula, such as Aguilar de Anguita or Alpanseque,⁷⁸ although those are considerably smaller in size (in no case are they larger than 15 ha) and they belong to a different historical context; with respect to the debate on their chronology, we still need to confirm through excavation that they were actually military enclosures.⁷⁹ For our case we present some preliminary results while remaining well aware of the need to increase the extent of the samplings so as to make progress in defining the size and boundaries of the structure (trial trenches on certain banks could provide more information in this respect).

c) Camp B: the Roman re-occupation of the summit of Cerro de las Albahacas

The third encampment area that we have analysed corresponds to the plain as an irregular enclosure measuring c.650 x 350 m located to the northwest of Camp A, which Polybius mentions (10.38.8) when referring to a plain next to Hasdrubal's camp that is large enough for the whole Carthaginian army to line up in. Here we pick up our working hypothesis

75 K. B. Pandolf, B. Givoni and R. F. Goldman, "Predicting energy expenditure with loads while standing or walking very slowly," *J. Applied Physiology* 43 (1977) 577-81.

76 I. Cárdenas, "Análisis SIG de un escenario arqueológico de batalla," in Bellón *et al.* 2015 (supra n.1) 257-71.

77 Quesada *et al.* 2015 (supra n.24) fig. 11.

78 A. Morillo, "Fortificaciones campamentales de época romana en España," *AEspArq* 64 (1991) 135-90; Morillo 2003 (supra n.45).

79 N. Sabugo and D. Rodríguez, "Alpanseque fort," in Morillo and Aurrecoechea (supra n.45) 216.



Fig. 9. Camp C: Loma de Garrancho. The borders are approximate (no structures were found) based on the dispersion of finds.

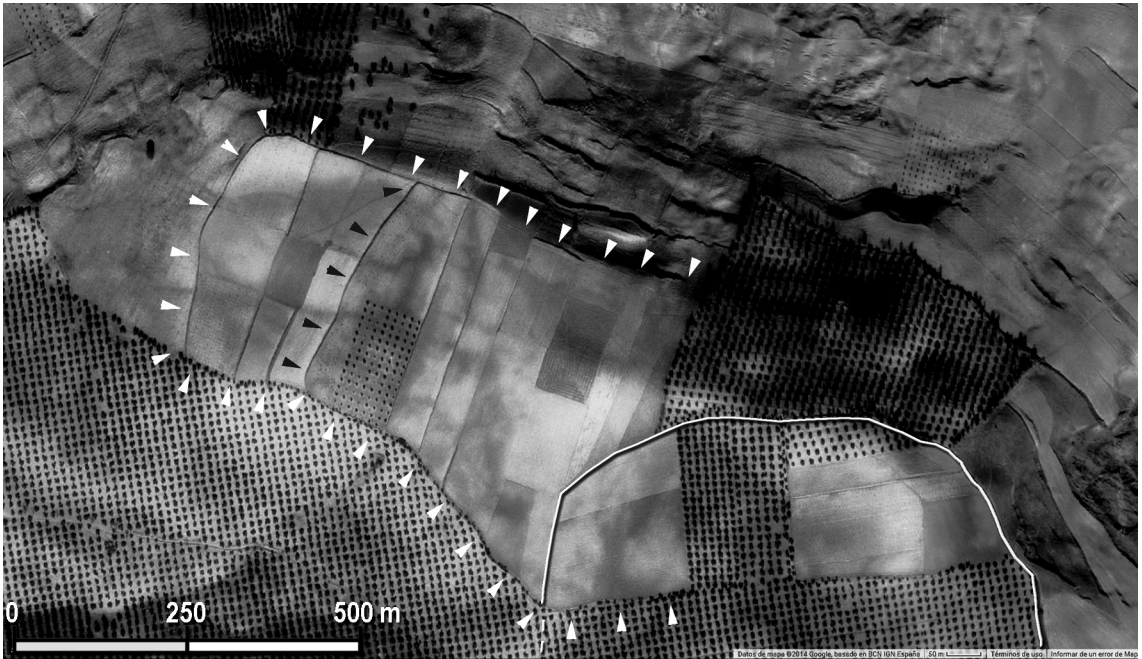


Fig. 10. Camp B after the battle.

(not solely derived from a reading of the sources) that, following the battle, this area was re-occupied by the Roman army, giving rise to a second camp,⁸⁰ distinct from that of the Carthaginians. This hypothesis leads us to interpret this zone as independent and different from Camp A, even if they may have shared a sector on the E part of the summit of Cerro de las Albahacas (fig. 10). From the outset, the archaeological record yielded numerous signs that pointed to this being a plausible area for a military camp:

- The first is the abundant density and dispersion of Iberian pottery, chiefly amphoras, in the area. As in the easternmost part of Camp A, there is a notable dispersion of Late Iberian pottery that one can link to the battle event.⁸¹ This can be explained by reference to the configuration of the area and its proximity to the *oppidum* of Baecula, which may have played a fundamental rôle in supplying the army while it was camped on Cerro de las Albahacas. Although marching armies do not use pottery vessels to transport their equipment or reserves, we associate this material and its dispersion with the proximity of the Iberian *oppidum* and its involvement in the battle, either prior to the attack, through supplying the provisions needed by the Carthaginian army, or subsequently, after the Romans took over the camp and made use of the provisions they found in the storehouses of the settlement proper.⁸² The finds can be dated to the mid- or late 3rd c.
- The second indicator concerns certain types of metal finds, such as pickaxes for use with tents or tinder lighters for fires, that may point to the presence of a camp.

80 Liv. 27.19.2; Polyb. 10.40.11. Polybius specifies that Scipio himself occupied the Carthaginian camp.

81 C. Rueda *et al.*, "Un contexto excepcional: las áreas campamentales en la batalla de Baecula," in Bellón *et al.* 2015 (supra n.1) 285-306.

82 A probable indicator could be a fragment of a cartwheel in the Iberian tradition found below the deliberately destroyed pottery. We could consider the possibility that local means of transport were used to transfer and relocate the provisions from the *oppidum*, barely 2 km from the camp.

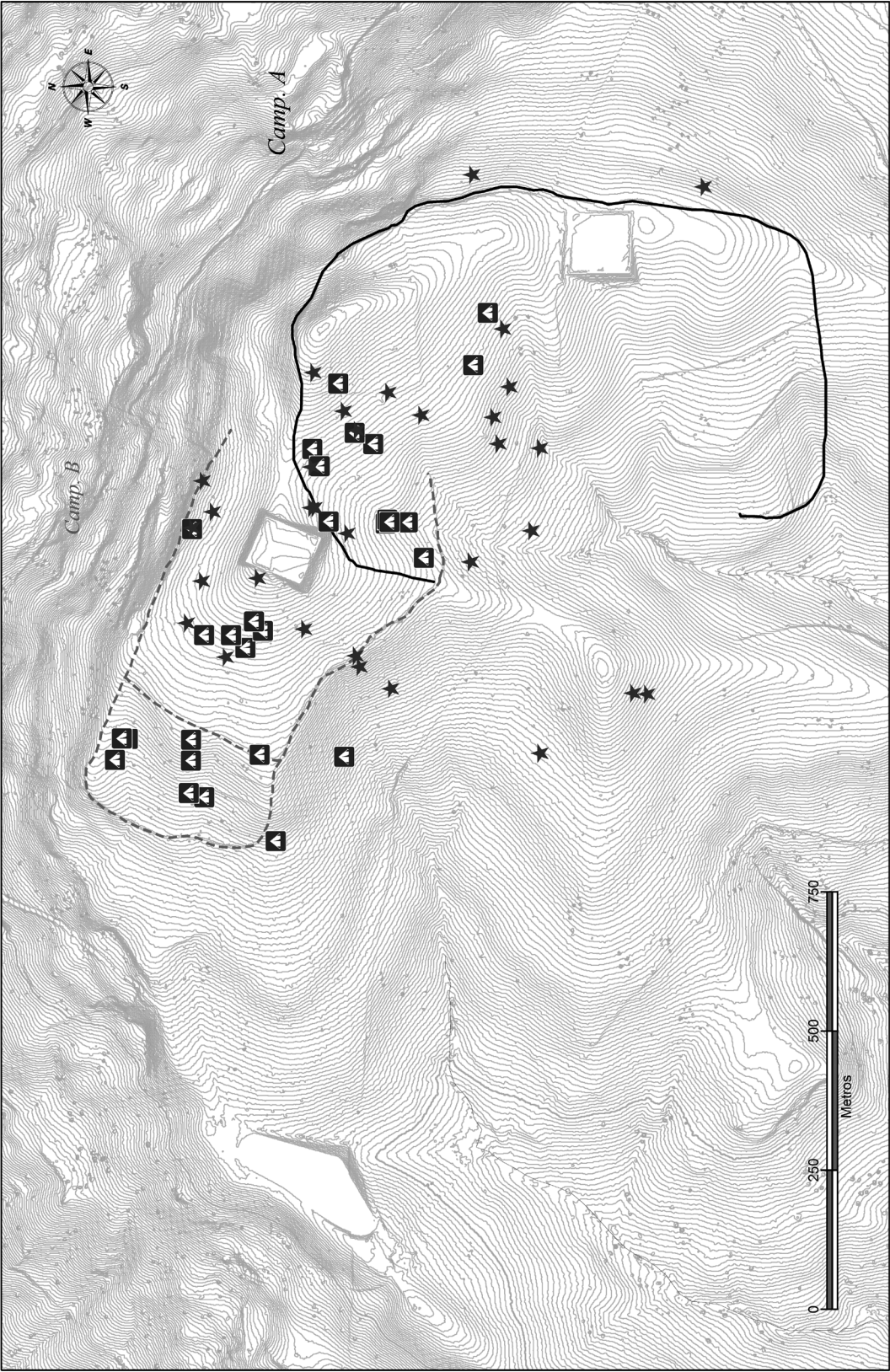


Fig. 11. The star marks imported pottery from Italy (Campanian A, Dressel 1A), Carthage (mortars), Baria (amphoras), and MGS (Van der Mersch's Western Greek amphoras). The distribution of tent pegs found in the camp areas at Cerro de las Alhacías is also marked by their own symbol.

- Third, on the summit of Cerro de las Albahacas there was a small concentration of imported pottery (Campanian A, Dressel 1A, MGS [Van der Mersch's Western Greek] amphoras, Roses pottery, amphoras from Baria, Carthaginian mortars) that made up less than 0.05% of the total analysed — the rest consisted basically of the Late Iberian pottery just mentioned — which here is consistent with a conflict context because it is logical that there would have been little pottery brought in from the outside but a large amount of indigenous ware, probably the result of the few days the camps were occupied and the need for direct supplying of and consumption by the Roman army (fig. 11).
- Fourth is the topography. There can be no doubt that this is a good site to set up a camp as it is at the highest, widest and flattest part of the summit of Cerro de las Albahacas.

The archaeological indicators, the topography and the evidence of aerial photographs required a further step to test our hypothesis that there was a camp structure here and, if so, determine how it was occupied.⁸³ In 2012 we employed an excavation method similar to that used at La Palma at the mouth of the Ebro, by which mechanical shovels remove the surface layer.⁸⁴ This system also allows the results from the use of metal detectors to be compared with the results of surface samplings and with those that come after the removal of between 25 and 30 cm of topsoil. The trial was carried out in the central zone of the camp, on a plot growing dry cereals, without hindrance from olive trees which are present on adjoining plots.

Using this system allowed us to locate dug into the bedrock a series of pits similar to traditional silos, forming small groupings of 4 or 5 set around an empty space. In total, some 19 structures of this type provide clear indicators of a link with a conflict. Indicators include the remains of weapons, such as a complete *moharra* or lance point (120A; in CE4) (fig. 12),⁸⁵ the remains of melted metal, slag and other elements from a possible furnace for recasting or repairing such items (CE1),⁸⁶ as well as a very large amount of deliberately-destroyed indigenous Iberian pottery. Stratigraphic study of the assemblages of excavated structural complexes (CE) reveals a sequence of use and abandonment over a very short period of time, thus delimiting and defining the chronological range of the event:



Fig. 12. Spearhead (No. 120A; CE4)

⁸³ We have been unable to carry out test trenches on the edges of the camp for lack of permission from the landowners.

⁸⁴ J. Noguera, "La Palma-Nova classis. A Publius Cornelius Scipio Africanus encampment during the Second Punic War in Iberia," *MadMitt* 53 (2012) 262-88.

⁸⁵ The typological classification of the object can be attributed to Quesada's (1997 [supra n.45] 373 ff.) Type 6b (VIC variant); they are frequently found in Upper Andalusia and fit in perfectly with contexts of the late 3rd c. B.C. See Quesada *et al.* 2015 (supra n.62).

⁸⁶ A. Rost and S. Wilbers-Rost, "Looting and scrapping at the ancient battlefield of Kalkriese (9 A.D.)," in Bellón *et al.* 2015 (supra n.1) 627-38.

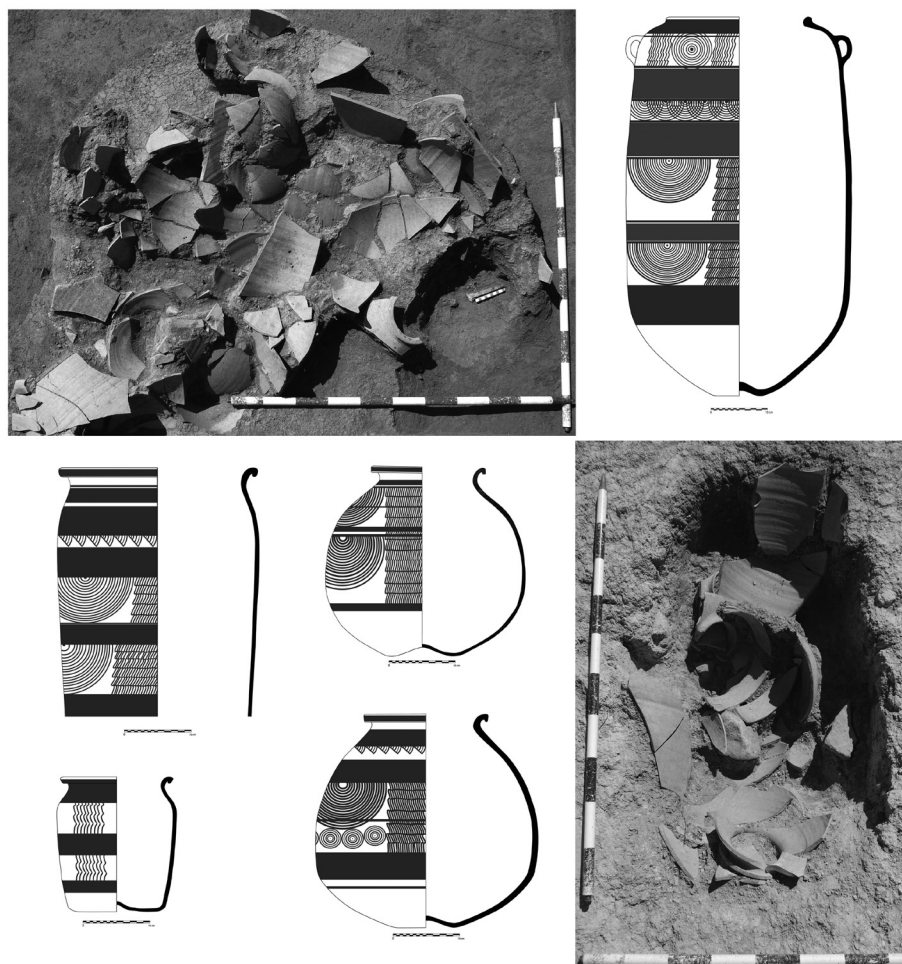


Fig. 13. Iberian pottery (restored) from the pits (CE12 and 23) excavated in Camp B.

1. On the floor of structures 12, 9 and 19 were found Hispano-Carthaginian coins (CNH 69, 44; CNH 69, 45) dated to the late 3rd c. (post-211 B.C.).⁸⁷
2. With respect to the destruction/abandonment context of the camp zone, we found a multitude of deliberately-destroyed Iberian pottery vessels, mainly storage ware but also with a few for consumption (fig. 13). The deliberate nature of the destruction is shown by large fragments of the vessels being grouped and/or distributed between several of the structures (fig. 14) and by splinters of pottery that reveal the violence of the action. Vessels had been destroyed and their pieces deliberately placed in different pits. The ware is clearly Late Iberian, although we have also documented two small globular ointment containers as well as Carthaginian mortars.⁸⁸ The latter, together with the Hispano-

⁸⁷ M^a P. García-Bellido, J. P. Bellón and I. Montero, "La moneda de un campo de batalla: *Baecula*," in Bellón *et al.* 2015 (supra n.1) 393-421.

⁸⁸ Found in CE19 (inv. nos. CAL13/E19/R9A and CAL13/E19/R12A, respectively). Although the shape is quite common, it is similar to those in the Utica museum (L. Khelifi, "Quelques réflexions sur les autochtones de Mateur durant l'époque punique," in A. Ferjaoui [ed.], *La Carthage punique: diffusion et permanence de sa culture en Afrique antique* [Tunis 2011] 240 cat. no. 24) and also ones found in the necropoleis of Puente Noy and Almuñécar (F. Molina and J. Bañón, "Los ungüentarios helenísticos de la necrópolis de Puente de Noy," in *Almuñécar: arqueología e*

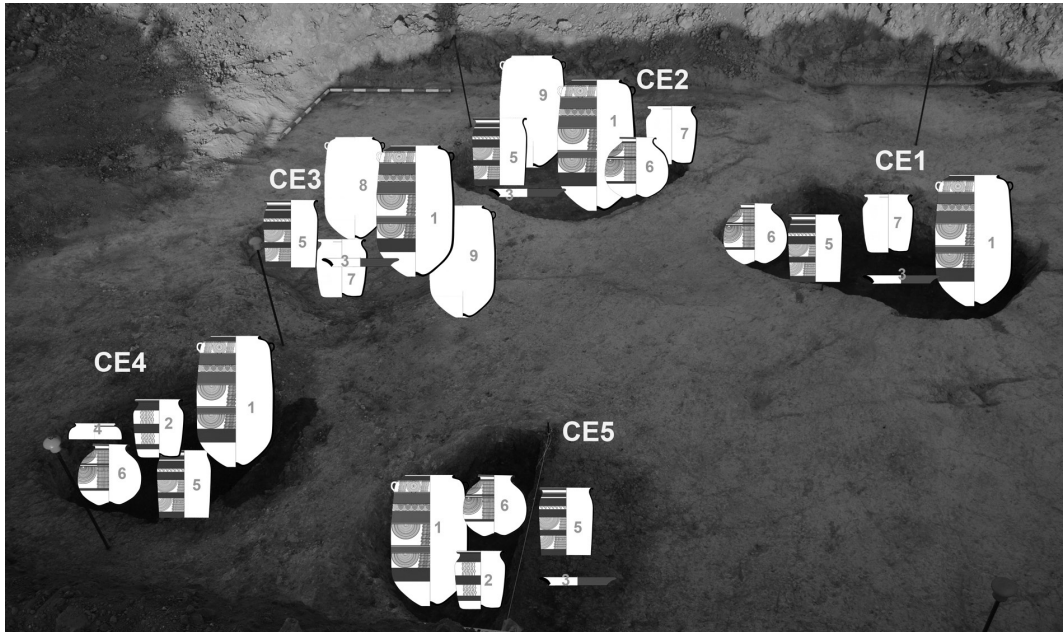


Fig. 14. Distribution of Iberian pottery in the excavated pits. Pieces from the same vessel in different pits indicates their intentional destruction.

Carthaginian coinage (fig. 15 in colour), opens up more possibilities regarding the use of this space, which we will consider below.

3. Above the level of the deliberately destroyed pottery is a fill in which we found Roman Republican coins (semi-libral asses, known as semi-unciae) issued at Rome around 217/215 B.C. The issue date fits perfectly with the time when they were possibly brought from the Italian peninsula to Cerro de las Albahacas. The same phenomenon was noted in the case of the La Palma camp in the Ebro Delta⁸⁹ (fig. 15).

In 2014, we found accumulations of pottery without any clear structural delimitation. They are probably piles of deliberately destroyed pottery in open spaces of the camp areas. Their distribution corresponds to the pattern seen with the other structures. They may also be linked to the abandonment and destruction of the Roman camp.

It is impossible to establish areas of direct correlation from the finds record since uses of the camp could have been more or less contemporaneous and overlapping. For example, it is possible that the Roman army itself could have been carrying Hispano-Carthaginian coinage (e.g., perhaps taken as booty when Carthago Nova fell just a year earlier). In a Second Punic War context it is also virtually impossible to tell who was using tableware (black-glazed ware or MGS amphoras) imported from different parts of the Mediterranean world. Furthermore, we are dealing with spatially juxtaposed and overlapping processes that took place over just a few days. Yet the use, destruction and abandonment contexts

historia [Granada 1983] 159-67). For the mortar, see S. Lancel, "La céramique punique d'époque hellénistique," in P. Lévêque and J.-P. Morel (edd.), *Céramiques hellénistiques et romaines II* (1987) 99-137, fig. 2.

⁸⁹ Inv. no. 53 (6.47 gm; RRC 38/7) and no. 70 (6.53 gm; RRC 38/7), coinage also found at La Palma: J. Noguera and N. Tarradell-Font, "Noticia sobre las monedas del campamento romano de la Segunda Guerra Púnica de la Palma (l'Aldea, Tarragona)," in A. Arévalo González (ed.), *Actas XIII Congreso nac. de Numismática "Moneda y Arqueología"* (Cádiz 2008) fig. 6 no. 21).

that allow us to establish micro-time sequences correlate with the areas of defined structures (Camps A, B and C) as well as their possible attribution to the different opposing armies. From such considerations, our interpretation of the archaeological record leads us to believe that Camp B can be identified as the Roman camp built after the battle and mentioned in the sources. The considerable density of finds, especially storage articles, together with items such as tent pegs, can be linked to a temporary occupation. This area also contains elements that coincide with the record for Camp C. Another factor to be kept in mind is that the 'privilege' of deciding the fate of the camp areas fell to the victor which in this case was the Roman army. They will have consciously destroyed or rendered useless structures and materials when they abandoned them. We found no evidence of any subsequent re-occupation.

Conclusions

The sequence of micro-periods provides several of the keys that has allowed us to establish hypotheses regarding the layout and use of encampment zones on the summit of Cerro de las Albahacas.

First, regarding the precise date of the activity, we cannot rule out the possibility that, once they had overrun the Carthaginian position established at a strategic point controlling the fords along the *Baetis* and not far from the *via Heraclea*, the Romans would have established a garrison at the site.⁹⁰ Yet it might seem strange that, before leaving for Tarraco, Scipio would have set up a garrison near pro-Carthaginian territory (i.e., close to Orongis, Ilturgi or Castulo), thereby leaving it exposed to the armies of Hasdrubal, Gisco and Mago. Overall, we cannot rule out the possibility that this garrison was established some years later. Actually, Livy mentions Baecula again around 207 when Scipio, having met up with Silanus in Castulo, marched towards Silpia (Ilipa),⁹¹ but this information appears to be a mistake on Livy's part, as has been pointed out by other scholars.⁹²

A second possibility is that the position was abandoned a few days after the battle. It is true that Livy 27.20.3 states that Scipio left within a few days of the battle, which indeed one could consider logical if he was planning to winter his army in Tarraco and prepare

90 However, there are no literary references to it. Cf. F. Cadiou, "Garnisons et camps permanents: un réseau défensif des territoires provinciaux dans l'Hispanie républicaine?," in Morillo, Cadiou and Hourcade (supra n.45) 81-100, although that does not completely rule out the possibility. Other fundamental references for the debate on this type of establishment and their correlation with the classical sources is the same author's *Hibera in terra miles: les armées romaines et la conquête de l'Hispanie sous la République (218-45 av. J.-C.)* (Paris 2008), and R. Knapp, *Aspects of the Roman experience in Iberia, 206-100 B.C.* (Anejos de Hispania Antiqua 9; 1977).

91 Liv. 28.13.5.

92 Among them, Corzo (supra n.44) 213-45. D. Hoyos ("The battle-site of Ilipa," *Klio* 84 [2002] 101-13) places Ilipa in the environs of Baecula. Long before that, G. De Sanctis (*Storia dei Romani* vol. 3 [Rome 1917] 498-99, n.86) analysed the question with reference to the ancient sources: "Livio narra che dopo esser giunto a Castulo ne Scipione s'avanzò ad Baeculam urbem, e qui sembra collocare anche il combattimento, contraddicendo alle altre fonti e a se stesso; chè non parla punto d'una avanzata cartaginese fin là e presuppone breve ed aperta la via tra il campo di battaglia e il mare, come era a Silpia e non a Becula. È evidente che egli ha ommesso per svista la marcia dei Romani da Becula a Silpia. La sua svista ha tratto in inganno alcuni moderni, che parlano d'una seconda battaglia di Becula [Mommsen, R.G. 18. 636; Delbrück I.2 392] o che, peggio, contro la geografia collocano Silpia nelle vicinanze di quella città [Niese, R.G. 4 121]."

it for subsequent manoeuvres in the area, such as the taking of Orongis (Livy 28.3-4). But we have not found any archaeological indicators that would point to one hypothesis or the other, and it is difficult to favour either. Further excavations may provide more information, but it may be an insoluble problem.

What we can rule out is the possibility that the remains of destroyed pottery and equipment are the result of the battle itself — in other words, that the structures belonged to the Carthaginian camp or lay on its periphery. Several arguments support this hypothesis:⁹³

- a) There is no generalised evidence of fire, although there are burned pottery remains (even burned and unburned fragments of the same vessel) that probably correspond to a deliberate fire set when the camp was abandoned.
- b) We have not found any animal/human remains associated with the abandonment/destruction levels.
- c) In the case of the very large amounts of pottery found, it had been deliberately destroyed and the pieces redistributed, an act designed to prevent its subsequent re-use or recuperation.

Ancient sources offer certain information about the abandonment of the camps following their use by the army. Josephus (*BJ* 3.89-90) tells of the custom of burning camps to avoid their subsequent use by an enemy:⁹⁴

When the time comes to leave the camp, the trumpet sounds the signal ... the tents are taken down and everything is prepared for the departure [...] the baggage is loaded onto the mules and beasts of burden, and the soldiers stand next to them [...] Then they burn the camp, as for them it is easy to set it up once again in the same place and thus they avoid the enemy being able to take advantage of it at some time.

Perhaps the context documented on Cerro de las Albahacas can help us understand the process. There the traces of fire are limited and perhaps connected to the intentional, planned abandonment of the camp. Fire would have been more effective in certain parts of the structure such as the stockade, where its effect would have been to render it useless to a potential enemy while perhaps also transmitting a strongly symbolic or apotropaic message. There are some archaeological guidelines for analysing the processes of destruction, abandonment and re-utilisation of camps,⁹⁵ even if it is often difficult to distinguish between different processes that entailed similar actions, producing similar archaeological indicators.

Other important points need to be made regarding the spatial distribution of structures across the site. First, they show a certain organic layout in small groups consisting of 5 or 6 units set a certain distance apart (fig. 15). The excavated area, however, does not allow us to gain an overall view of the assemblage that could explain the internal distribution of structures in the encampment zones. More extensive sampling is needed to detect the presence of a pattern in this respect.

The position of the excavated structures with respect to Camp A (Carthaginian) appears to indicate that the Romans set up a new camp after the battle and did not re-occupy or re-use the Carthaginian camp, as Polybius (10.40.11) might have us believe. A more plausible

93 J. M. Pesez and F. Piconnier, "Les traces matérielles de la guerre sur un site archéologique," in A. Bazzana (dir.), *Castrum 3. Guerre, fortification et habitat dans le monde méditerranéen au Moyen Âge* (Rome 1988) 11-16.

94 We are grateful to F. Quesada for references.

95 Cf. E. Shirley, *Building a Roman legionary fortress* (Charleston, SC 2001) 80-81.



Fig. 16a. Strategic control of Cerro de las Albahacas over the Guadalquivir valley: view to the south.

explanation is that it was taken over by the army in order to plunder what had been left behind (cf. Livy 27.19.2). The presence of the structures, the distribution of tent pegs, and the dispersion of indigenous and imported ware all lend support to this hypothesis. It is further supported by the analysis of the historical aerial photographs, which suggest that there were probably large areas used for both camp structures, given the actual space needed to set up the Roman camp on the summit of Cerro de las Albahacas opposite the position of the Carthaginian camp located on its E part (figs. 10–11).

As a consequence, there is a clear structural differentiation between the camp zones: that is to say, there were two on the summit of Cerro de las Albahacas. Camp A is considered to be that occupied by the Carthaginian army because of the existence of the palisade and its dimensions, which coincide with Punic modules of measurement, as well as because of its position in the overall configuration of the battle scenario. It is almost impossible to attribute specific finds to it, but the dispersion of tent pegs appears to be limited to the area of Camp B. To the west of Camp A, there is a flat area — much of which would have been occupied by Camp B — in which we have documented a programme of planned abandonment and the destruction of structures and pottery vessels that can be linked to an action taken by the Roman army. In any event, the sequence of events — construction of Camp A → battle → construction of Camp B → abandonment of Camp B — is consistent with the stratigraphy attested in the trial trenches dug thus far, even if it will be necessary to extend the excavated areas in order to strengthen this hypothesis (fig. 16a; fig. 16b in colour).

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