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# The Presence of the Roman Army in North-Western Hispania: New Archaeological Data from Ancient Asturias and Galicia

**ZUSAMMENFASSUNG**

Im äußersten Nordosten der Iberischen Halbinsel wurden in den letzten Jahrzehnten mehrere Römerlager entdeckt. Die meisten dieser Fundstellen stehen vornehmlich in Zusammenhang mit Augustus' Kriegen gegen indigene Gemeinschaften, die von antiken Autoren als *Cantabri* und *Astures* genannt werden.

Ziel dieses Beitrages ist es, einige der jüngst in den spanischen Regionen León, Asturien und Galicien sowie im Norden Portugals entdeckten archäologischen Stätten zu präsentieren. Für ihre Erforschung wurde ein wenig kostenintensives methodisches Vorgehen angewendet und historische und moderne Luft- bzw. Satellitenaufnahmen sowie LiDAR, GIS-Software und konventionelle Prospektion kombiniert sowie auch lokale Ortsnamen und mündliche Überlieferung berücksichtigt. Da aus dem Arbeitsgebiet bisher nicht viele *castra aestiva* bekannt sind, ermöglichen es diese Fundstellen nun, die Aktivitäten der römischen Armee im Nordwesten der Iberia während der ersten Jahre des Prinzipats besser zu verstehen.

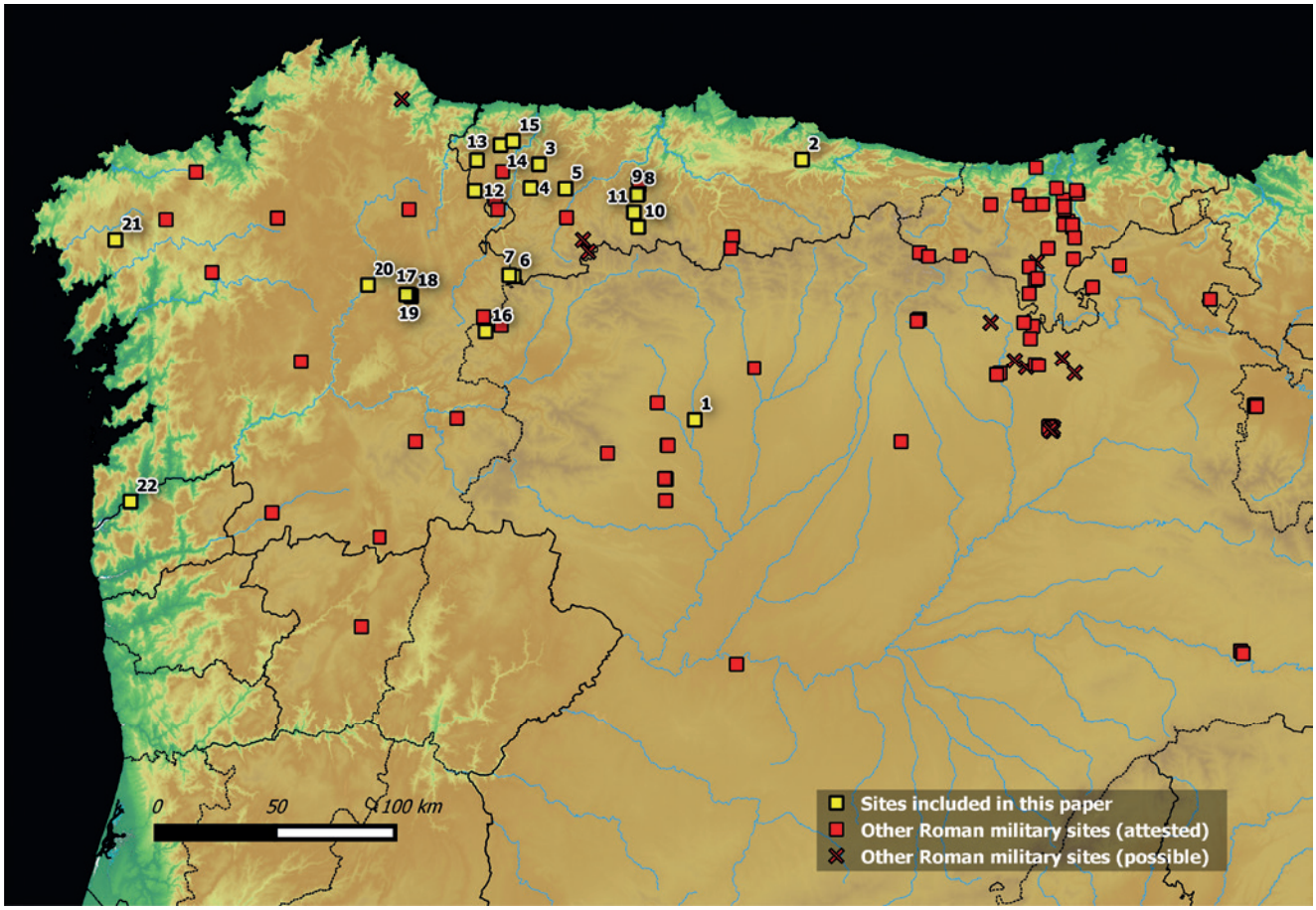


Fig. 1: Roman military sites in North-Western Iberia. Huerga de Frailes (1), Picu Viyao (2), Moyapán (3), El Chao (4), La Resiełła (5), A Granda das Xarras (6), A Recacha (7), El Mouru (8), Valbona (9), El Xuegu la Bola (10), Cueiru (11), A Penaparda (12), El Pico el Outeiro (13), A Pedra Dereta (14), El Chao de Carrubeiro (15), A Serra da Casiña (16), Monte da Modorra (17), Monte da Chá (18), Cabianca (19), O Monte dos Trollos (20), O Cornado (21), Campos (22) (© authors).

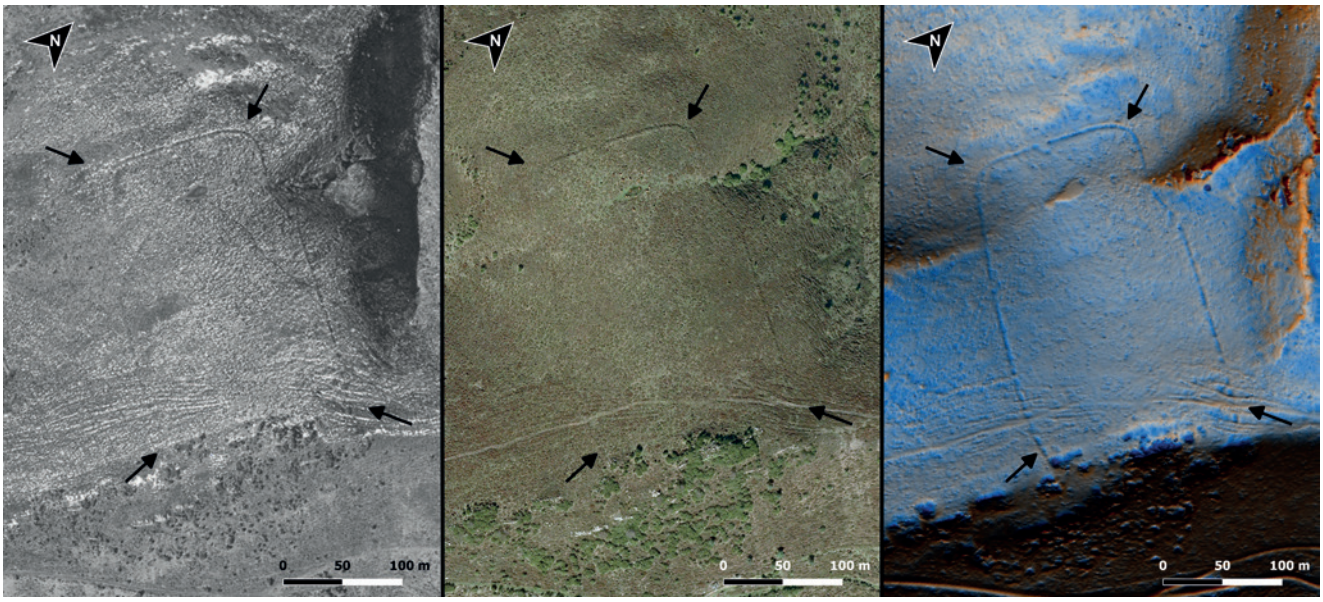


Fig. 2: Remote sensing techniques (historical and modern aerial photography, LiDAR-derived visualizations) applied to the study of the Roman camp of El Chao de Carrubeiro (© authors).

## INTRODUCTION

Since the last decade of the 20th century, Roman military archaeology in Spain has been revolutionized. In this period methodology has evolved and several sites have been discovered, mainly in the northern section of the River Duero basin and in the mountainous areas of Cantabria and Asturias[1]. Some of these sites could be linked with the campaigns of Augustus in Hispania; others might explain pre- and post-war scenarios in the transition from the Late Republic to the Early Empire.

Our aim in this paper is to present the new military sites discovered in the westernmost part of this region through geospatial technologies in combination with field surveying (Fig. 1).

## METHODOLOGY

The relationship between Roman military archaeology and aerial photography in the Iberian Peninsula is not new. Archaeological sites such as *Numantia* (Soria) or Cáceres el Viejo (Cáceres) were surveyed by the Spanish Airforce during the first decades of the 20th century[2]. Two stereoscopic flights were commissioned by the Spanish government to the USAF (United States Air Force) after World War II covering the entire country[3]. The archaeological use of those flights led to the discovery of new camps, such as Castrocalbón (León)[4] and Valdemeda (León)[5]. More recently, the conducting of flights sensitive to archaeological practice has also contributed to the development of the discipline[6].

Nowadays, it is possible to obtain digital aerial orthophotos of the entire Spanish[7] and Portuguese[8] territories with a resolution of 25 or 50 cm and to access repositories of satellite imaging, such as Google Earth[9] or Bing Maps[10]. The open access to these data has allowed not only a review of the sites previously known, but also the development of systematic survey methods especially effective in mountainous regions without a dense vegetation canopy or in areas of extensive farming[11], where ancient structures can be remotely detected due to the varying accumulation of moisture.

In forested areas airborne LiDAR (Light Detection and Ranging) has the capability to penetrate dense vegetation canopies[12]. However, the identification of archaeological features on LiDAR-derived Digital Elevation Models (DEM) is very dependent on the visualization techniques used. Thus, a combination of methods is the only way to obtain the maximum amount of information on potential archaeological features[13].

In order to maximize the results and to understand the landscape in greater detail, we have combined airborne LiDAR data and satellite imagery with historical and modern aerial photos[14]. When necessary, we have used Structure from Motion (SfM) photogrammetry to orthorectify and georeference historical aerial photos, allowing us to obtain new cartographic data, namely Digital Surface Models (DSM) and orthophotos[15].

Consequently, we have been able to develop a new diachronic, versatile and multi-disciplinary strategy for the study of Roman military sites which has shown its value by revealing details sometimes hidden to other unidimensional approaches (Fig. 2). This method has been developed as a complementary tool for archaeological field survey, not as its substitute. All potential features have been validated in the field.

## THE SITES

Our study area comprises the Spanish territories of León, Asturias and Galicia, in addition to the Portuguese districts north to the River Douro. This large region shows a very heterogeneous landscape (high mountain ranges, vast plains, valley areas, densely forested zones) which implies a real test for our methodology. Here 22 sites will be analyzed (Fig. 3)[16].

### EL PÁRAMO, LEÓN (FIG. 1 NO. 1)

Huerga de Frailes is located on the left bank of the River Órbigo (León), showing an archetypical playing-card shape[17]. Intensive ploughing destroyed the ramparts a long time ago, so it was thanks to modern aerial photography that we could detect the traces of the ditches due to the differential accumulation of moisture (Fig. 4,3).

| SITE | | LAYOUT | NET AREA | DEFENCES | | | ESTIMATED GARRISON | |
|---|---|---|---|---|---|---|---|---|
| | | | | Rampart | Ditches | *Claviculae* | Manpower | Nominal Cohorts |
| *Huerga de Frailes* | | Rectangular | 11.7 | Razed | 1 | - | 6,600 | 13.75 |
| *El Picu Viyao* | | unknown | 0.3–2.6 | Yes | 1 | - | 175–1,475 | 0.35–3.05 |
| *Moyapán* | | Trapezoidal | 1.46 | Yes | 1 | 2 | 825 | 1.72 |
| *El Chao* | | Rectangular | 8.88 | Yes | - | - | 5,000 | 10.43 |
| *La Resiełła* | | Square? | 3.29 | Yes | - | 1 | min. 1,850 | min. 3.87 |
| *A Granda das Xarras* | | Rectangular | 5.59 | Yes | 1 | - | 3,150 | 6.57 |
| *A Recacha* | | Irregular | 0.82 | Yes | 1 | 1? | 475 | 0.96 |
| *El Mouru* | | Square | 9.66 | Yes | 1 | - | 5,450 | 11.35 |
| *Valbona* | | Ovoid | ca. 4.14 | Yes | 1 | - | 2,350 | 4.86 |
| *El Xuegu la Bola* | | Trapezoidal | 10.41 | Yes | 1 | 3 | 5,875 | 12.23 |
| *Cueiru* | 1 | Irregular | min. 6.48 | Yes | ? | 1 | 3,650 | 7.61 |
| | 2 | Trapezoidal | 1.59 | Yes | ? | 1 | 900 | 1.87 |
| *A Penaparda* | | Rectangular | 10.14 | Yes | 1? | 2 | 6,850 | 14.26 |
| *El Pico el Outeiro* | 1 | Rectangular | 10.3 | Yes | - | - | 5,800 | 12.1 |
| | 2 | Square | 0.19 | Yes | 1 | - | 100 | 0.22 |
| *A Pedra Dereta* | | Irregular | ca. 10–10.5 | Yes | 1 | - | 5,350–5,900 | 11.16–12.34 |
| *El Chao de Carrubeiro* | | Rectangular | 4.42 | Yes | 1 | 3 | 2,500 | 5.2 |
| *A Serra da Casiña* | | Rectangular | 11.6 | Yes | 1 | 1 | 6,550 | 13.63 |
| *Monte da Modorra* | | Rectangular | 13.14 | Razed | 1 | - | 7,400 | 15.44 |
| *Monte da Chá* | | Square | 12.07 | Yes | 1 | - | 6,800 | 14.18 |
| *Cabianca* | | Square | 4.61 | Yes | 1 | 1? | 2,600 | 5.42 |
| *Monte dos Trollos* | | Rectangular | ca. 6.76–9.23 | Yes | 1 | - | 3,800–5,200 | 7.94–10.84 |
| *O Cornado* | | Rectangular | 13.3 | Yes | 1 | - | 7,500 | 15.63 |
| *Campos* | | Square? | min. 4.92 | Razed | 1 (Razed) | - | min. 2,775 | min. 5.78 |

Fig. 3: Layout, area, defences and estimated maximum garrison of the sites studied here (© authors).

**EASTERN ASTURIAS** (FIG. 1 NO. 2)
El Picu Viyao is an Iron Age hillfort located in eastern Asturias. In addition to its defensive structures, some rampart-and-ditch defences form a triangular enclosure which protects a water spring in its lower vertex (Fig. 4,10). Considering the morphology of these structures and their defensive concept, we have proposed the refortification and reuse of the hillfort as a Roman *castellum*[18].

**SOUTH-WESTERN ASTURIAS** (FIG. 1 NOS. 3–5)
The small Roman camp of Moyapán is close to a natural route connecting the watersheds of the rivers Navia and Narcea[19]. Its trapezoidal layout with rounded corners reflects an adaptation to the local topography (Figs. 4,9; 7,4). An earth bank and a single V-shaped ditch form the defences, while the two *claviculae* mark the location of the gates.

While Moyapán was located using aerial imagery, two new enclosures were discovered thanks to LiDAR visualizations. El Chao lies on a high plateau from where it controls a traditional route connecting the inner Asturian region from east to west. Despite the deterioration of the ramparts, it is still possible to recognize its slightly irregular playing-card perimeter (Fig. 5,6). La Resiełła stands on a gentle summit over a lower, flat mountain range. Although a rectangular shape is supposed for this camp, only two ramparts and a *clavicula* protecting the gate facing southwest remain of it (Fig. 4,8).

**O BIERZO AREA** (FIG. 1 NOS. 6–7 AND 16–20)
The sites of A Granda das Xarras and A Recacha are located in a mountainous area where three present-day Spanish provinces converge (León/Asturias/Lugo)[20]. They are separated by barely 1.7 km, but they cannot be seen from

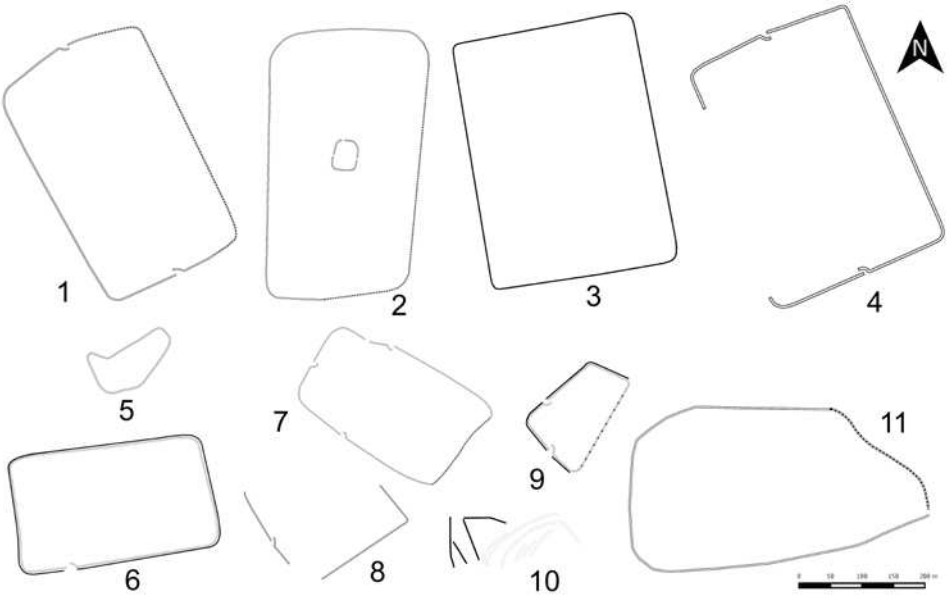


Fig. 4: Roman military enclosures (1/2). A Penaparda (1), El Picu El Outeiro (2), Huerga de Frailes (3), A Serra da Casiña (4), A Recacha (5), A Granda das Xarras (6), El Chao de Carrubeiro (7), La Resiełła (8), Moyapán (9), Picu Viyao (10), A Pedra Dereta (11) (© authors).

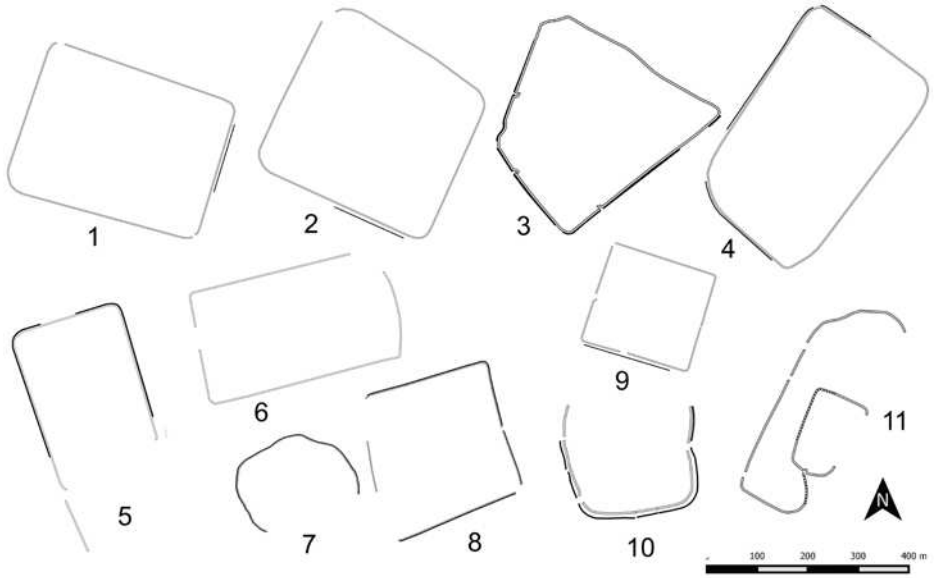


Fig. 5: Roman military enclosures (2/2). Monte da Modorra (1), Monte da Chá (2), El Xuegu La Bola (3), O Cornado (4), O Monte dos Trollos (5), El Chao (6), Valbona (7), El Mouru (8), Cabianca (9), Campos (10), Cueiru (11) (© authors).

one another. A Granda das Xarras was placed on a mountain-top plateau and shows the classical playing-card layout (Fig. 4,6). The defences are also canonical: an earth rampart and a single ditch. A Recacha is a small *castellum* with an impressive visual control of the surrounding territories. Although its shape is irregular due to the local topography, the defences are a mixture of rectilinear lines and rounded corners (Fig. 4,5). The remains of an earth rampart are still visible but the ditch is almost completely concealed. These sites have been recently excavated and the preliminary results confirm our previous observations[21].

A Serra da Casiña (León)[22] is located in the mountainous range which connects León and Galicia. The enclosure shows an archetypical plan for a marching camp except for some slight deviations owing to the local topography (Fig. 4,4). The defences have almost disappeared due to herding activities, but aerial photography and LiDAR visualizations reveal the traces of a rampart, a single ditch and two *claviculae* entrances.

To the west, three enclosures were located on a plateau called "A Chá de Santa Marta" (Lugo)[23]. The site of Monte da Modorra has practically disappeared nowadays due to agricultural activities. It looks like its rectangular plan with rounded corners was perfectly adapted to the plateau's western end (Fig. 5,1). At the eastern end Monte da Chá shows a similar situation (Fig. 5,2). Rectangular in shape, the site has been almost wiped out by reforestation activities. Cabianca is the smallest camp of this set of three and it shows a perfect square layout with rounded corners (Figs. 5,9; 7,3). Its defences comprise an earth bank, a single ditch and maybe one *clavicula* entrance.

Finally, the site of O Monte dos Trollos (Lugo) lies 16 km to the west of this group, on a plateau controlling the River Miño. Although reforestation has damaged the site, the rampart and ditch are still visible in the field. The camp seems to have been rectangular (Fig. 5,5), and it shows an annex similar to those documented in other Spanish temporary camps[24].

Fig. 6: El Xuegu la Bola, north-western sector. The melting of the snow reveals the traces of the ancient ditch (© authors).

**SOUTHERN ASTURIAS** (FIG. 1 NOS. 8–11)

In mountainous areas, the easiest way to cover long distances is to follow the mountain ranges with gentler slopes. "La Mesa" is a historical route which connects the regions of León and Asturias by using these ranges. We located four sites here (Fig. 5)[25], but two more could be added to the list[26].

El Mouru shows a slightly irregular playing-card layout (Fig. 5,8). A low rampart and a silted up ditch are the only remains of its defences, and they have practically disappeared on its western side. Close to it, Valbona presents an irregular rounded shape (Fig. 5,7), but its defences are very similar to those of El Mouru: the inner rampart was made with earth and stones extracted from the outer ditch. Due to herding activities, the southern area of this site has disappeared.

El Xuegu la Bola is a large trapezoidal enclosure with curved corners (Figs. 5,3; 6; 7,1) which controls a narrow mountain pass along La Mesa route. Its defences are eroded, but still recognisable both in the field and by using LiDAR-based visualizations.

Two enclosures were detected in Cueiru controlling another mountain pass. The inner one (1.5 ha) is more regular, almost a playing-card, and it shows a *clavicula* defending its southern gate (Fig. 5,11). To the west and surrounding the former, there is a bigger precinct. The eastern side of both enclosures is defended by the natural slope of the mountain.

**NORTH-WESTERN ASTURIAS (FIG. 1 NOS. 12–15)**

Four temporary camps were detected following another series of mountain ranges which connects the Galician province of Lugo with the basin of the River Navia in Asturias[27].

The camp of A Penaparda (Lugo) was partly destroyed by ploughing (Figs. 4,1; 7,2). However, we can recognize a large playing-card enclosure with two *claviculae* entrances.

The site of El Pico el Outeiro (Asturias) can be found immediately to the northeast. Its irregular playing-card perimeter was severely damaged by recent human activities, as historical aerial photography shows (Fig. 4,2). Only a rampart is still visible in some areas. An inner, rectangular enclosure, probably a *castellum*, was also detected here.

A Pedra Dereta (Asturias) shows a certain regularity in its western sector, with three linear sides and rounded corners (Fig. 4,11). To the east, the enclosure becomes increasingly narrower, a solution that resembles the use of triangular earthworks (*bracchia*) in other Roman fortifications[28].

The camp of El Chao de Carrubeiro (Asturias) is the best preserved site of this series (Fig. 2). Its earth rampart creates a playing-card layout, although the perimeter is slightly altered to avoid a small stream (Fig. 4,7). Three *claviculae* entrances are clearly recognisable.

**WESTERN GALICIA-NORTHERN PORTUGAL (FIG. 1 NOS. 21–22)**

The last two camps are far distant from the others and they could be somehow linked with the Meridian Depression, a natural passage already used in Roman times which crosses western Galicia from south to north[29].

The playing-card layout of O Cornado (A Coruña) perfectly suits the hill on which the camp is located (Fig. 8,1)[30]. From here, it visually controls the transit throughout its surrounding area. Although reforestation and farming activities have damaged the site, its earth ramparts and outer ditches are still well preserved in some areas (Fig. 5,4).

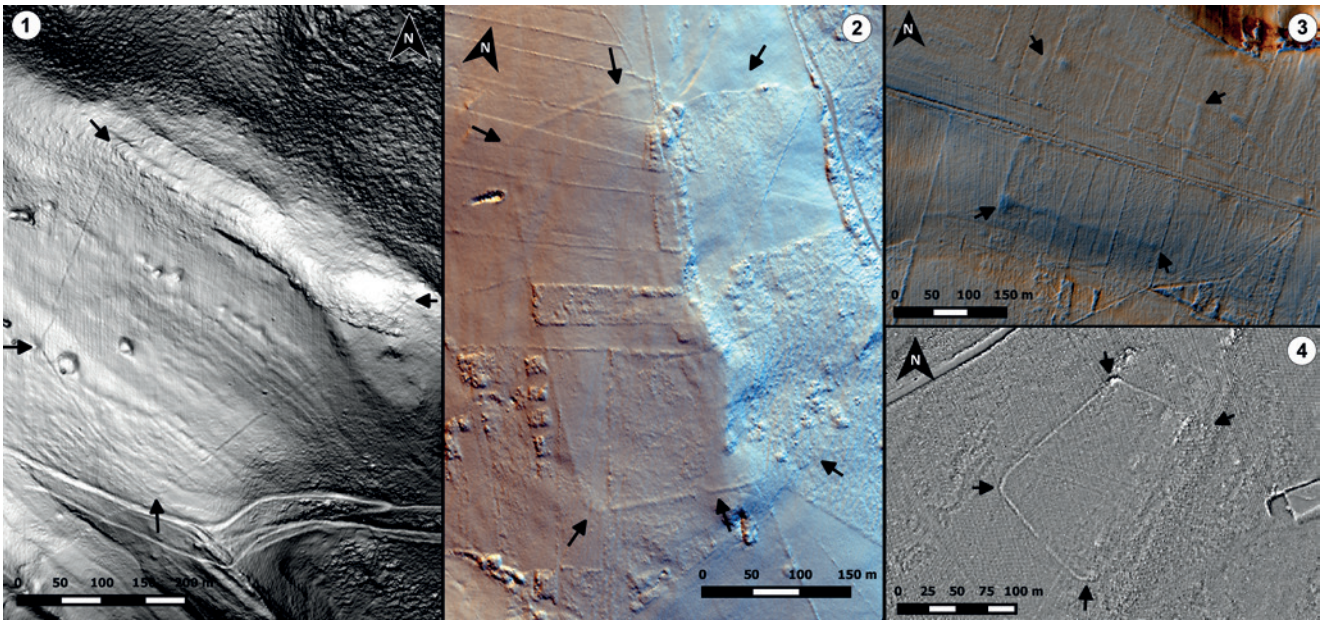


Fig. 7: Different visualization techniques for LiDAR data. El Xuegu la Bola (1), A Penaparda (2), Cabianca (3) and Moyapán (4) (© authors).

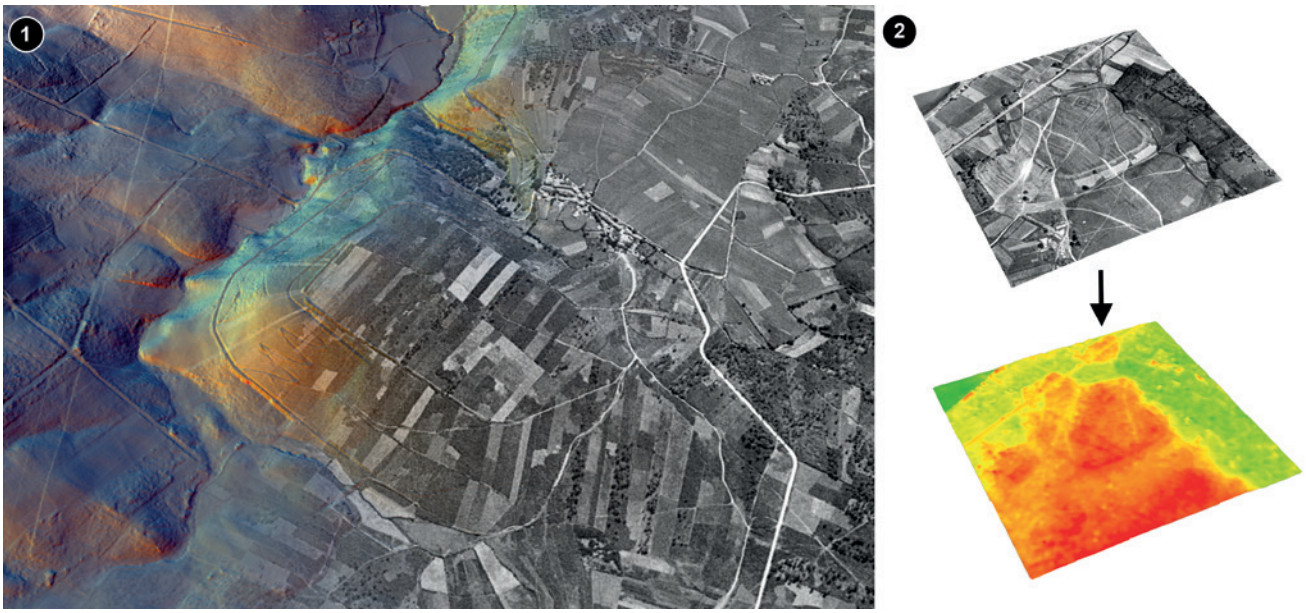


Fig. 8: Recreating ancient landscapes. LiDAR-derived DEM of O Cornado (1) and photogrammetric DEM of Campos (2) (© authors).

Unfortunately, the site of Campos (Portugal) is completely lost due to the construction of an industrial park[31]. It lay on the southern bank of the River Minho and close to a major Roman road. Its playing-card layout was detected in some historical aerial photos whose photogrammetric reconstruction allowed us to observe the rampart and outer ditch in greater detail (Figs. 5,10; 8,2).

## CONCLUSIONS

The presence of the Roman army in the north-western area of the Iberian Peninsula is still a historical topic with too many gaps to be filled. In the last decades, aerial archaeology and remote sensing techniques have provided us with an interesting amount of new archaeological data that should support new analyses and narratives. Undoubtedly, the more the research advances, the more the ways in which the Roman military presence reveals itself in the landscape tend to diversify in the archaeological record.

Some of the sites included in this paper could be linked with the Augustan campaigns in northern Spain (29–19 BC) or with the following occupation process. The operational base of the Roman army was then placed in the Spanish northern plateau, so the discovery of new military installations can be expected here. On the other hand, the presence of camps close to natural routes or passages across the mountains probably indicates their use as incursion or flanking routes. Finally, the concentration of fortifications in specific locations might as well indicate their recurrent use as operational bases.

The reoccupation of El Picu Viyao could be related to the same historical context and it surely was highly symbolic for the local population[32]. The *castella* of A Recacha and El Pico el Outeiro were probably acting as stations controlling certain passages or territories. We cannot discard a connection of some sites – such as Moyapán – with the early stages of gold-mining extraction in this region.

Cornado and Campos are the first Roman camps to be de-

tected in the westernmost area of Iberia. Since the Augustan campaigns focused on the Asturian and Cantabrian territories, the dating and function of these sites is still not clear. They could belong to the Late Republican era or to the early Julio-Claudian period, when the first Roman infrastructures were built and the exploitation of the local natural resources began.

However, in order to better understand the real nature of the changes that took place in the last centuries BC, this line of research should be complemented by a thoughtful analysis of the indigenous communities living in these territories. Historical phenomena such as the Cantabrian-Asturian Wars cannot be solely analyzed as a series of military acts carried out by the Roman army. The native population played an active role in this dialectical scenario of contact and cultural change[33].

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7 PNOA-IGN (<*pnoa.ign.es*> [accessed 23.02.2018]).
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11 Menéndez et al. 2013a.
12 Doneus et al. 2008; Opitz/Cowley 2013.
13 Challis et al. 2011; Bennett et al. 2012; Štular et al. 2012.
14 Crutchley 2009.
15 Vales et al. 2010; Pérez et al. 2013, Pérez et al. 2014.
16 This paper shows the state of knowledge in March 2016, when the paper was submitted. Since then, several new sites have been discovered in northwestern Iberia.
17 Menéndez et al. 2011b.
18 González Álvarez et al. 2011.
19 González Álvarez et al. 2008.
20 Menéndez et al. 2011a.
21 Orejas et al. 2015.
22 Menéndez et al. 2015.
23 We detected these sites by the end of 2014 after reviewing the USAF photographs of 1957. However, two of them had been previously notified to the local authorities by the archaeologists L. F. López and A. Orejas and published after the end of the XXIII Limes Congress (Orejas et al. 2015).
24 Cepeda 2006.
25 González Álvarez et al. 2011/2012.
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28 Labory 2005; Napoli 2001.
29 González-Ruibal 2001.
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