



ARTICLES

## The Berlanga Cup. New Evidence of Hadrian's Wall Pans Found in Hispania Citerior (Spain)

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### Abstract

The Berlanga Cup is the second piece found in Hispania of the type known as the Hadrian's Wall series. Despite its artistic interest, it bears important information about the Wall, since it is the only element of the series that mentions the forts located on the eastern side of Hadrian's Wall. This study encompasses research on epigraphy, archaeometry, the virtualisation of the piece, and the survey of its context with a GPR and an artefactual survey. Arguments are provided regarding use as gifts purchased by their owner or given to him to commemorate his military career, perhaps linked to the *Cohors I Celtiberorum*, which would later accompany him on his return to his place of origin in Roman Celtiberia.

**Keywords:** Hadrian's Wall series; pans; Celtiberia; Berlanga; Hispania; Roman army

### Introduction

More than two centuries ago, in Rudge Coppice, near Froxfield, a village in the west of England, one of the objects that has most fascinated researchers of the Roman world was discovered. This small bronze cup or bowl, hemispherical in shape and barely 9 cm in diameter, is known as the Rudge Cup. This piece aroused the interest of various scholars, among whom the work of J.D. Cowen and I.A. Richmond in 1935 stands out.<sup>1</sup> Its decoration, with enamel filling small cells cut into the metal, was interpreted by Cowen as one of the oldest representations of Hadrian's Wall, the most emblematic Roman construction on the island. Interest in the piece increased when the names of five forts on the Wall, corresponding to those located in its central-western sector, were recognised on the rim of the cup.<sup>2</sup>

Throughout the twentieth century, other pieces with similar characteristics were added to the Rudge Cup: the Amiens Patena,<sup>3</sup> the Bath Pan,<sup>4</sup> the Ilam Pan (also known as Moorlands

<sup>1</sup> Cowen and Richmond 1935.

<sup>2</sup> For a main reference on the Wall fort names: Breeze 2006.

<sup>3</sup> Heurgon 1949; 1951; Maheo 2012.

<sup>4</sup> Henig *et al.* 1988, 14, no. 23, fig. 8.23, pl. X; Tomlin 1988, 55.

or Staffordshire Patera),<sup>5</sup> the Basildon fragment<sup>6</sup> and the Hildburgh fragment.<sup>7</sup> It should be noted that the name of the latter, unlike similar pieces, does not refer to its place of origin (located in the current Spanish provinces of León and Zamora) but to the person who purchased the piece and included it in their collection. This set of cups has been referred to as ‘The Rudge type’, ‘the British pans’, ‘the Fort pans’ and, more recently, ‘the Hadrian’s Wall pans’.<sup>8</sup> These names refer to the first piece found, the place in the Roman Empire where it was created, and, finally, the forts and Hadrian’s Wall itself depicted on it. An important characteristic shared by several elements of the series, beyond their shape or decoration, is the schematic representation of the wall through towers and the inscribed mention of forts along it. Throughout history, these pieces have been referred to in various ways, from the generic ‘vase’ to more specific names such as ‘cup’ and, above all, ‘patera’.

Almost 2,000 kilometres from Hadrian’s Wall, in Berlanga de Duero (Soria, Castilla y León, Spain) (Hispania Citerior), a new chance find recovered another cup or bowl of this type (Fig. 1). This bowl or cup can confidently be attributed to the corpus, both because of the inscription with the names of four forts on the Wall: CILURNUM, ONNO, VINDOBALA and CONDERCOM (represented as [CILU]RNUM, ONNO, V[IN]DOBALA and CONDERCOM), and because of the representation of the characteristic crenellated towers. This new find, in farmland, has led to research into the piece and the place where it was found, with the aim not only of studying the piece but also of learning about and investigating the site where it was discovered.

This work focuses on the Berlanga Cup, so we will first discuss the piece itself. We will examine its characteristics, inscription and decoration, and present the results of archaeometric analyses and the contributions of virtual digitisation: a new form of representing and studying such elements thanks to the so-called digital twin. Next, the find will be contextualised in Roman Berlanga and the results of the GPR and artefactual survey carried out on the farmland where it was located, La Cerrada de Arroyo, will be presented. Finally, the piece will be discussed as part of the Hadrian’s Wall pans typology, emphasising its contribution to the latter.

## The Berlanga Cup

The name we have chosen to refer to the protagonist of this work is ‘Berlanga Cup’, referring, as usual, to the place where it was found. In our case, we will use cup rather than *patera* due to the absence of a handle and to establish a more evident link to the Rudge Cup. *Trulla* is also a common name used in the definition of those examples that bear traces of a handle, and the definition seems accurate since *trullae* are a well-known part of army equipment. The cup is deposited at Soria’s provincial Museum (Museo Numantino) and has the inventory code 2025/3.

<sup>5</sup> Breeze 2012a, 3–4; Jackson 2012.

<sup>6</sup> Cassibry 2021, 117–18, fig. 3.6.

<sup>7</sup> This piece was acquired in Barcelona by Dr Hildburgh for his private collection, which led it to take the name of its owner, even though all cups of this type are named after the place where they were found. As this cup was found in the provinces of León and Zamora (Castilla y León, Spain) (Cowen and Richmond 1935, 322; Allason-Jones 2012b), and it was the only piece of this type found in Hispania and in a context so far from Hadrian’s Wall, it would have been appropriate to use a place name for its designation. In this way, the cup could be renamed using a name such as León, as it came from the ancient kingdom of León to which both provinces belonged, or the name of the *conventus* or even that of a river in the area, such as the Esla.

<sup>8</sup> Popkin 2022, 79–82.

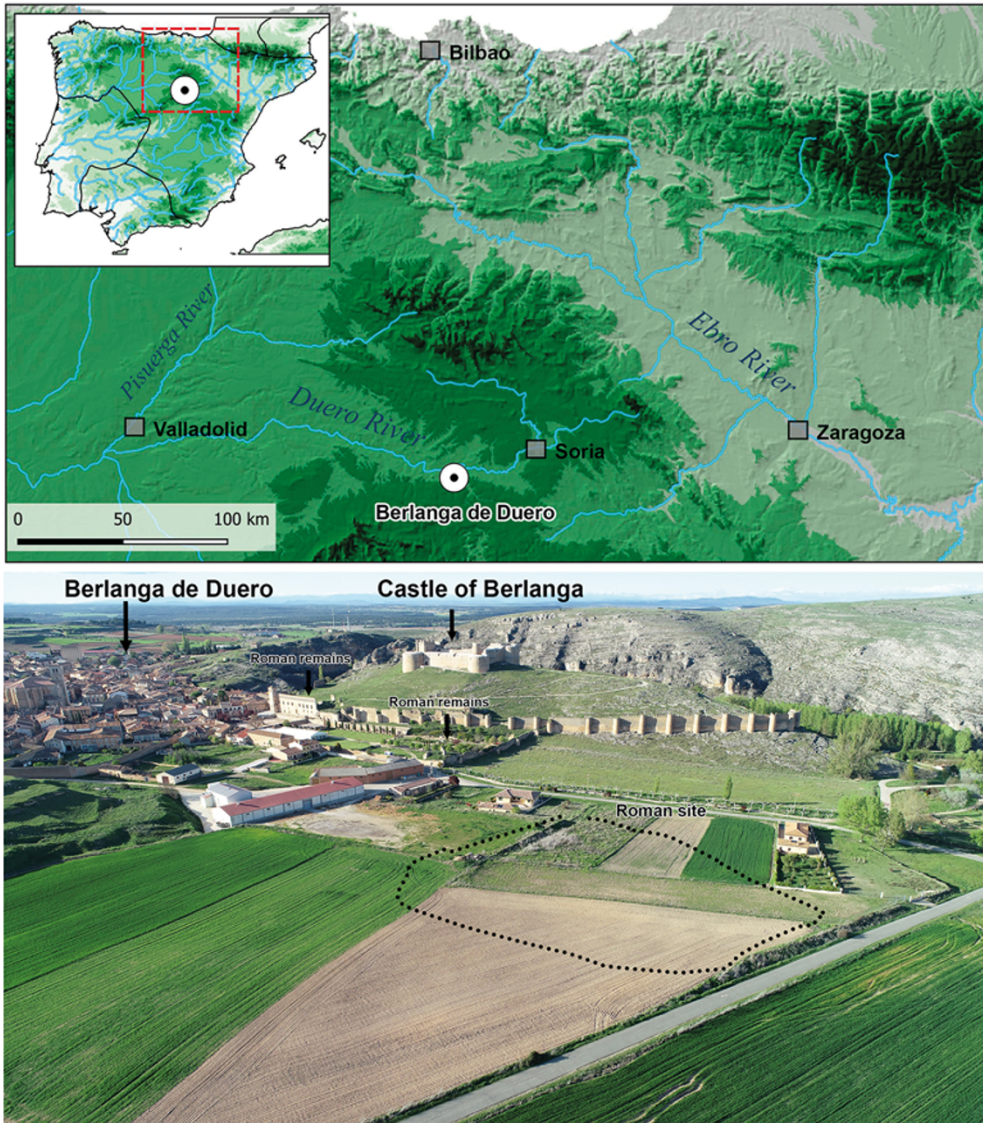


Fig. 1. Location of Berlanga de Duero (Soria) on the Iberian Peninsula and aerial view of the La Cerrada de Arroyo site, where the 'Berlanga Cup' was found, with the town of Berlanga in the background. (Roberto De Pablo, Susana De Luis, Jesús García).

### Formal characteristics

The cup was found fractured, deformed and incomplete, with approximately 80–90% remaining. The fragments are largely in good condition (Figs. 2 and 3). Currently, four fragments are preserved and the breaks in the different segments match perfectly. The largest fragment constitutes more than half of the piece and gives an approximate idea of the shape and dimensions of the cup. The second fragment, which may be a quarter or a fifth of the bowl, is much more deformed, but part of the rim and bottom remain intact, allowing the upper inscription to be read. The third fragment is small and corresponds to



DOBALAGONDERCOMALL RNYMOMNOY

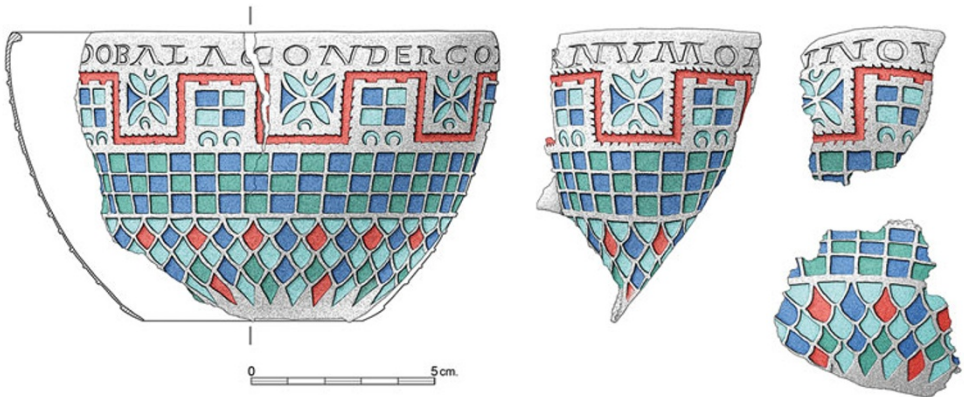


Fig. 2. Berlanga Cup. (Above) Photograph (Roberto De Pablo); (below) Drawing (Francisco Tapias).

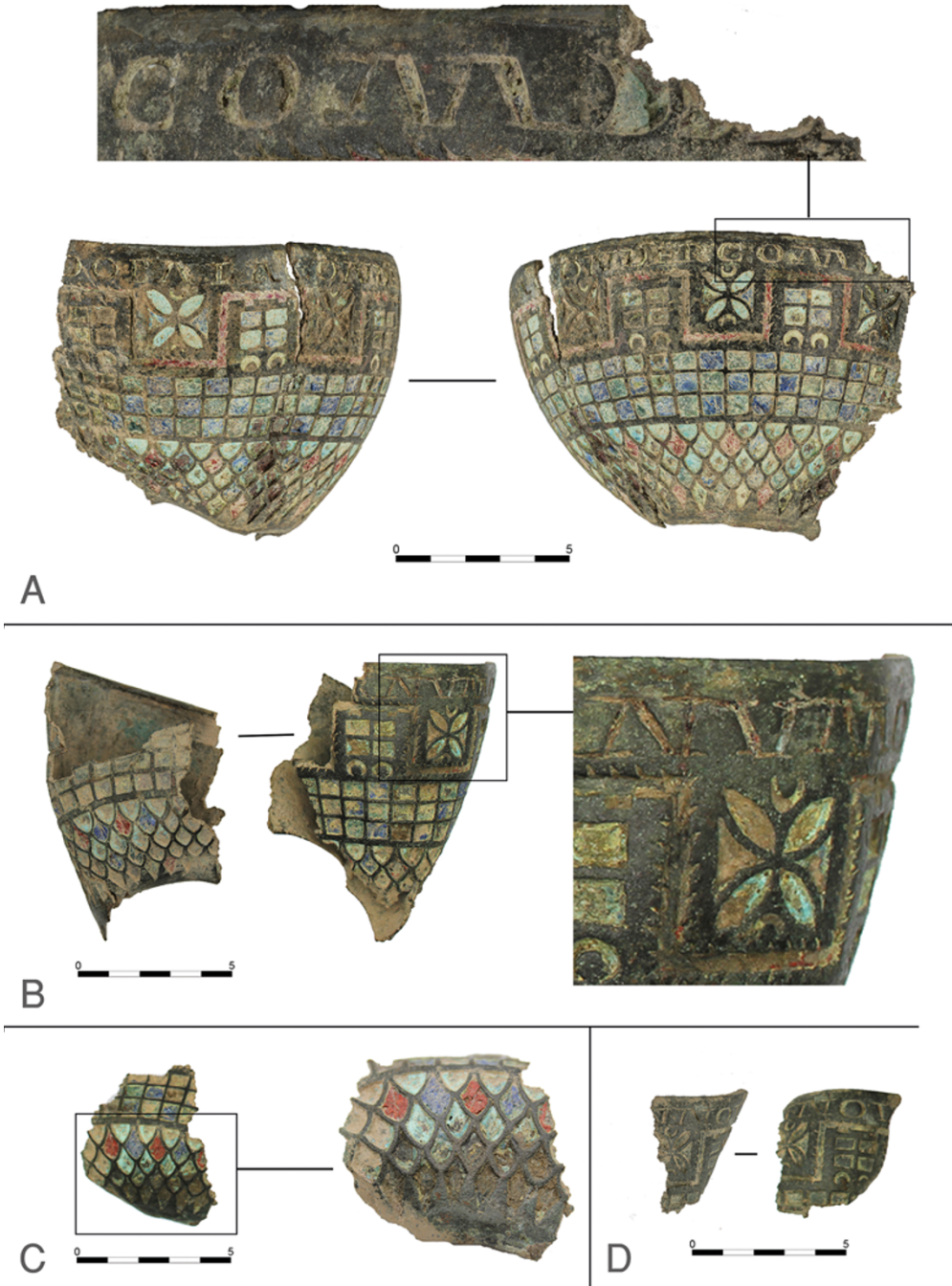


Fig. 3. Details of the Berlanga cup. (A) Details of the end part of CONDERCOM plus 3 or 4 Ds; (B) ending part of the word [cilu]RNUM; (C) enamel decoration; (D) connection between ONNO and V[i]N]DOBALA. (Susana De Luis).

the upper part of the bowl. It preserves a significant part of the name of one of the forts. The fourth and last piece corresponds to the lower part of the cup.

The Berlanga Cup is a hemispherical bowl with an inward-facing, slightly thickened rim. The walls are thin, barely 1–1.5 mm thick, but this did not prevent the creation of hollows to be filled with enamel on the outside. The base has a smooth rim without the characteristic ring foot that finishes off other examples such as the Rudge Cup, the Amiens Patera or the Ilam Pan, being much more like the finish of the Hildburgh fragment. As with other cups, the Berlanga Cup has no remains of the base, which was most likely a separate piece, much thinner, that was welded to the inside of the cup, as is the case with the Rudge Cup<sup>9</sup> or the recently discovered Scremby Cup.<sup>10</sup> It also lacks a handle, and there is no evidence of deformation indicating one; however, we cannot confirm or deny this as the cup has not survived in its entirety.

The Berlanga Cup is larger than other Hadrian's Wall pans. The maximum diameter was approximately 114 mm below the rim. We have calculated its dimensions from the largest fragment that retains its undistorted rim and, above all, from the scan and subsequent virtual reconstruction of the piece. The rim of the cup, where the inscription is located, is barely 2 mm smaller. At the height of the rim, it would have a circumference of approximately 358 mm, of which 286 mm remain. The base of the cup has a very simple finish: a smooth rim without a foot, approximately 50 mm in diameter. The height is around 81 mm, making this cup the largest of all the Hadrian's Wall pans, together with the Hildburgh fragment, exceeding the Rudge Cup, the Amiens Patera, the Bath Pan and the Ilam Pan by more than 30 mm.

The outer surface of the cup is decorated with enamel decoration in various colours, which can be divided into two clearly differentiated parts: in the upper section, a Latin inscription runs around the rim of the cup, occupying only a small space, and in the lower part, there is a large decorative space with three horizontal friezes.

The piece is slightly larger, both in diameter and especially in height, than the Rudge Cup, the Amiens Patera, the Ilam Pan and the Bath Pan. In this sense, we can say that it is more similar in size to the Hildburgh fragment, as it has a similar height (around 80 mm), although the diameter is smaller, by almost 5 cm. This characteristic makes us doubt the reconstruction that was made of the Hildburgh piece from Zamora-León.<sup>11</sup>

In terms of its decoration, the Berlanga Cup is enamelled in the same colours as the other known cups and the decorative motifs are similar. The most revealing example is the thick line that runs along the frieze of the towers and the metopes with plant motifs or crescents, which is always decorated in carmine red. The Berlanga Cup bears the greatest morphological and decorative similarities to the Hildburgh fragment, both in terms of its decoration and its dimensions. Furthermore, both pieces appear to have been found on the Iberian Peninsula.

### **The inscription**

The upper part of the cup bears a Latin epigraphic inscription consisting of 24 incised letters 5.5 mm high, with traces of green and red glass paste inside (Figs. 2 and 3). The shape of these letters differs from that on the Rudge Cup or the Amiens Patera, which appear in relief or are almost sculpted, with the letters on the Ilam Pan and the Basildon fragment being the closest in terms of technique and morphology. The preserved letters are as follows:

<sup>9</sup> Allason-Jones 2012a, 25.

<sup>10</sup> Willmott *et al.* 2024, 509.

<sup>11</sup> Cowen and Richmond 1935, 323, fig. 1.

[...]RNVMONNOV[...]DOBALACONDERCOMDDDD<sup>12</sup>

Despite the absence of some letters due to the loss of these fragments of the bowl, we can distinguish the names of four forts located in the eastern sector of Hadrian's Wall (Table 1):

[...]RNVN = [cilv]RNVN (Chesters, Northumberland)  
 ONNO = ONNO (Halton Chesters, Northumberland)  
 V[...]NDOBALA = V[i]NDOBALA (Rudchester, Northumberland)  
 CONDERCOM = CONDERCOM (Benwell, Northumberland)

The full names of two forts, *Onno* and *Condercom*, survive which leaves no doubt that they can be attributed to those archaeologically documented at Halton Chesters and Benwell respectively, which the *Ravenna Cosmography* names as *Onno* and *Condercor* and which the *Notitia Dignitatum* mentions as *Hvnnno* and *Conderco*. In the case of V[...]DOBALA, despite the loss of two letters, it refers to the fort of *Vindobala*, as the ending –DOBALA leaves no room for doubt.

Only the name of the first fort could pose a problem, as only the last four letters of it are preserved ...RNVN. However, the interpretation as CILVRNUM is the most likely. The other three recognised forts are located on the eastern side of the Wall and are named in the same order in which they were located on it, *Onno–Vindobala–Condercom*, read from west to east. Therefore, if we follow the same logic, the fort named before *Onno* should be *Cilurnum* (Cilurno), and the ending makes this likely.

The epigraph ends with four D-shaped or crescent-shaped symbols filled with turquoise enamel. Of these symbols, the first is almost complete, while the rest only retain their lower parts.

The inscription contained at least 30 letters based on the interpretation of the names inscribed there, plus the four D-shaped symbols. Given its fragmentary state and considering that it is the piece with the fewest letters despite being the largest of those that preserve the inscription, the possibility was initially raised that it might have had a fifth name that was lost. In this regard, considering the layout of the forts and the fact that the inscription ends with CONDERCOM and the four DDDDs, there was a possibility that the inscription ended with the name of the fort of *Brocolitia*<sup>13</sup> (Carrawburgh) or, less likely, with that of *Vercovicium*<sup>14</sup> (Housesteads), which is part of a late addition to the building programme of the Wall.<sup>15</sup>

However, a detailed analysis of the piece rules out the possibility of a fifth name in the cup. If we consider that 286 mm of the rim of the cup with 28 symbols (24 letters plus 4 Ds) has been preserved and that the circumference was 358 mm, between 6 and 7 more letters or symbols could have been represented. We assume that six of these letters are missing (the I and N of VINDOBALA and the C, I, L and V of CILVRNVN), as they complete the two names of forts, which would give a total of 34. In that case, we would be left with a maximum of one letter, making it impossible to fit in a fifth name.

The inscription on the cup found in Berlanga is the most innovative part, as the decoration follows the ornamental models of the Rudge Cup or the Amiens Patena. The reading of four forts on the eastern side of Hadrian's Wall is a remarkable addition to the archaeology of the Wall. This is the first known find of a cup that refers to the eastern side of the

<sup>12</sup> These three or four 'D's (DDDD) are actually three or four symbols with this shape (see Fig. 3A).

<sup>13</sup> Brocoliti in the *Ravenna Cosmography* and Procolitia in the *Notitia Dignitatum*.

<sup>14</sup> Velurion in the *Ravenna Cosmography* and Borcovicio in the *Notitia Dignitatum*.

<sup>15</sup> D.J. Breeze pers. comm., 2025.

**Table 1.** Table listing the inscriptions of the forts mentioned in the Hadrian's Wall Pans and in both the Cosmography of Ravenna and the *Notitia Dignitatum*.

| Berlanga Cup | Hadrian's Wall Pans |                |             |                   | Ravenna Cosmography | <i>Notitia Dignitatum</i> |
|--------------|---------------------|----------------|-------------|-------------------|---------------------|---------------------------|
|              | Rudge Cup           | Amiens Patera  | Ilam Pan    | Basildon Fragment |                     |                           |
| –            | MAIS                | MAIS           | MAIS        |                   | MAIA                | –                         |
| –            | –                   | –              | COGGABATA   |                   | –                   | CONGAVATA                 |
| –            | ABALLAVA            | ABALLAVA       | –           |                   | AVALANA             | ABALLABA                  |
| –            | VXELODUM            | VXELODUNUM     | VXELODUNUM  | [...]VM           | VXELLUDAMO          | PETRIANIS                 |
| –            | CAMBOGLANS          | CAMBOGLA[...]S | CAMMOGIANNA | C [...]           | –                   | AMBOGLANNA                |
| –            | BANNA               | BANNA          | –           |                   | BANNA               | –                         |
| –            | –                   | –              | –           |                   | –                   | MAGNIS                    |
| –            | –                   | ESICA          | –           |                   | ESICA               | AESICA                    |
| –            | –                   | –              | –           |                   | –                   | VINDOLANA                 |
| –            | –                   | –              | –           |                   | VELVRTION           | BORCOVICIO                |
| –            | –                   | –              | –           |                   | BROCOLITI           | PROCOLITIA                |
| [...]RNUM    | –                   | –              | –           |                   | CELVNO              | CILVRNO                   |
| ONNO         | –                   | –              | –           |                   | ONNO                | HVNNO                     |
| V[...]DOBALA | –                   | –              | –           |                   | VINDOVALA           | VINDOBALA                 |
| CONDERCOM    | –                   | –              | –           |                   | CONDERCOR           | CONDERCO                  |
| –            | –                   | –              | –           |                   | –                   | PONTE AELI                |
| –            | –                   | –              | –           |                   | SERDUNO             | SEGEDVNO                  |

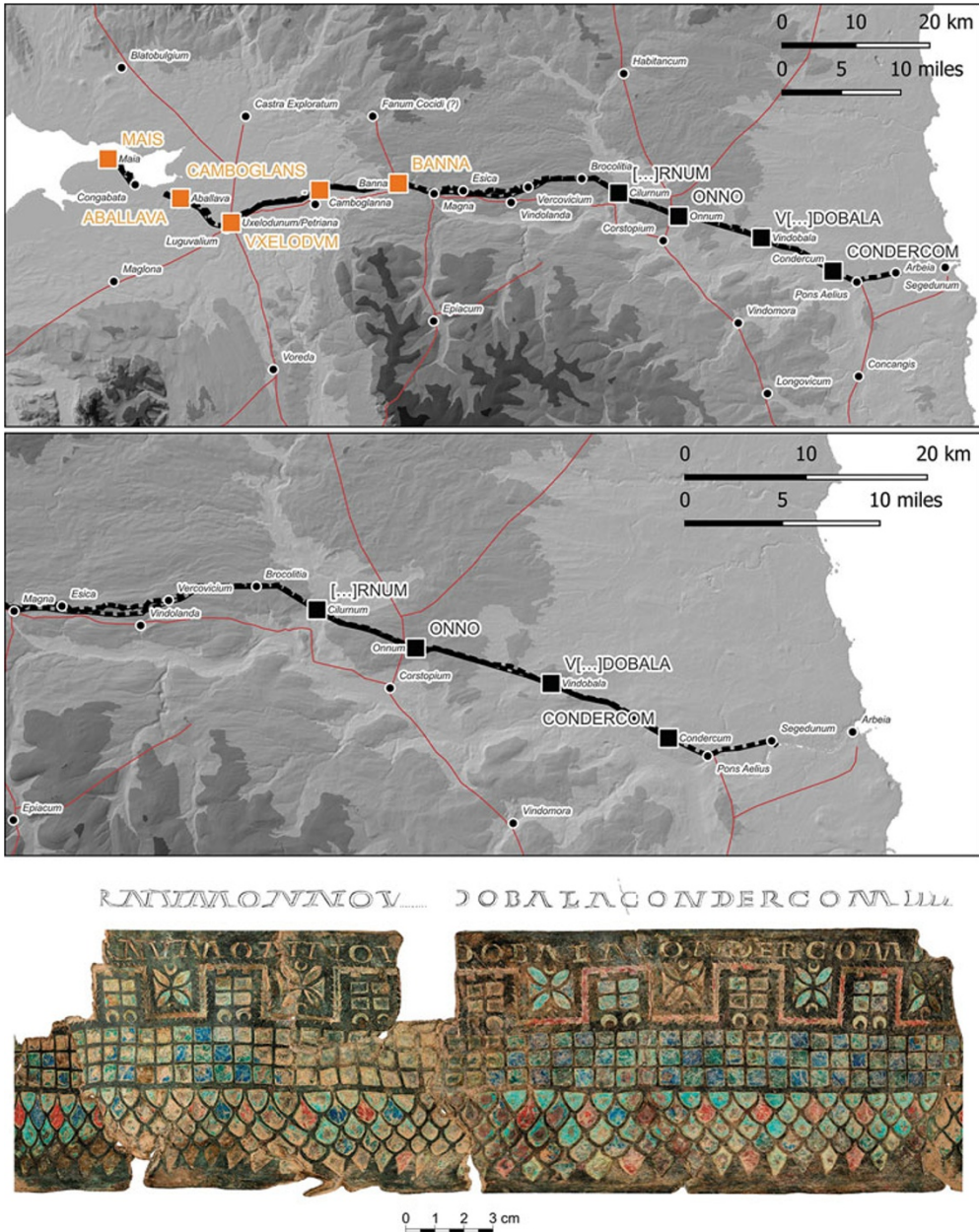


Fig. 4. Hadrian's Wall. (Above) Layout of Hadrian's Wall with the forts as mentioned in the Rudge Cup; on the western side, the forts mentioned in the cups known to date are marked, and on the eastern side, those from the Berlanga cup; (centre) extract from the eastern side of the Wall with the camps mentioned on the 'Berlanga Cup' (Jesús García with data from Nicky Garland (2020)); (below) orthographic display on a plan of the outer surface of the cup (3D Stoa – Archaeology and Heritage).

Wall (Table 1 and Fig. 4). None of the Hadrian's Wall pans bears the names of the forts found on the Berlanga Cup, so it will allow us to advance in the study of these pans.

### The decoration

Beneath the inscription, and across the entire exterior surface, there is a colourful decoration distributed across three friezes and filled with four types of enamel: red, green, turquoise and navy blue. The enamel is housed in the cells cut into the bronze base, alternating colours to achieve a striking and dynamic appearance (Figs. 2 and 3).

The lower frieze consists of five rows of geometric motifs in the shape of fish scales: the first row alternates blue, red and green; the second row alternates blue and green; the third is a single colour, turquoise; the fourth alternates blue and red; and the fifth is again turquoise only.

The central frieze is organised into three bands of squares, alternating green and blue, which gives an appearance of unity. Finally, the central frieze combines two types of metopes, separated by a thick serrated cord whose interior is enamelled in red. The first metopes are presented as a projection of the lower frieze in the form of a crenellated tower. The interior of these is divided into four squares filled with blue and turquoise enamel, with two half-moons at the base filled with turquoise. The second type of metope is decorated with four-petalled flowers filled with turquoise enamel. These floral motifs are framed above and below by two green enamelled crescents and, on the sides, by triangles filled with blue enamel. This colourful decoration even extends to the letters and symbols of the inscription, which are also filled with turquoise.<sup>16</sup>

The upper friezes, present on all Hadrian's Wall pans except the Ilam Pan, have traditionally been interpreted by most researchers as an elevation of the wall itself, from which crenellated turrets protrude, which can be seen as military forts, perhaps those mentioned in the epigraphy. The two largest cups, the Berlanga and the Hildburgh fragment, also show a third frieze at the bottom with curved motifs which, if we follow the majority hypothesis, should be interpreted as the ditch in front of the wall.

Allason-Jones,<sup>17</sup> without denying the previous reading, proposes a different interpretation, also shared by Jackson.<sup>18</sup> She suggests: 'Whether the pattern represents turrets, crenellated or not, is still the subject of debate; it is possible that they represent forts projecting from the Wall with the crossed line representing the roads through a four-gate fort'. The crenellations may represent fort walls or fort gateways. In our opinion, the first interpretation is more feasible, since the central frieze, which is interpreted as the curtain wall, shows a chequered pattern resembling rough ashlar masonry, a representation that also extends to the towers, which were made of masonry stone. Furthermore, as we shall see later, based on the layout and interpretation of the forts, we believe that this is a view of the wall seen from the inside. However, we cannot rule out Allason-Jones's view as a possible alternative.

### Archaeometric characterisation

The study to determine the composition of the metal and the characteristics of the enamel used the INCIPIT-CSIC's Olympus Vanta M series portable X-ray fluorescence spectrometer (pXRF). This instrument is equipped with a rhodium (Rh) anode X-ray tube and a large-area silicon drift detector (SDD). Measurements are taken at 50 kV voltage and 0.2 mA current. The protocol, based on Olympus' Alloy Plus program and optimised for the analysis of archaeological alloys, is used for metal quantification, with a collimated beam 3 mm in diameter and measurement times of 30 seconds. The spectra were quantified using software developed by Olympus, which employs a fundamental parameter algorithm to correct

<sup>16</sup> Cowen and Richmond 1935, 317–18.

<sup>17</sup> Allason-Jones 2012a, 26.

<sup>18</sup> Jackson 2012, 54.

automatically for inter-elemental effects, providing results normalised to 100% by weight. For the enamel, the geochem mode with two-beam system was used, with total acquisition times of 60 seconds.

The metal of the bowl was analysed in the surface patina and then in a small clean area after removing the patina, taking advantage of a fracture zone. The results in [Tables 1&2](#) show significant distortion in the patina relative to the original metal's composition, with significant enrichments of tin (from 17.5% to 9.35% in the metal) and lead (22.7% to 10.5% in the metal).

The alloy is classified as leaded gunmetal or quaternary alloy due to the presence of zinc (3%). According to Pollard *et al.*<sup>19</sup> and Jouttijärvi,<sup>20</sup> this alloy is already quite common in Roman metals from the second century A.D., with a frequency of 30–40% among the objects analysed, although this varies by object type. The addition of lead is desirable in cast moulded pieces, as in our case. This heyday of gunmetal in the second century A.D. is interpreted as the result of the practice of mixing brass with local bronze.<sup>21</sup> The low proportion of zinc in our specimen (3%) is in line with the general trend of zinc content, below 5% in the case of leaded gunmetal.

As for minor elements, silver (0.21%) and antimony (0.18%) are the two main impurities, while arsenic and nickel, although detected, do not reach 0.1% in the clean metal. The presence of these two elements leads us to classify its composition within metal group 7 (CG7) of the Pollard *et al.* classification. This group is the second most common in Roman metals from Britain (about 20% of the objects analysed), after group 3, which is characterised solely by the presence of antimony. In contrast, both the leaded gunmetal alloy (10%) and copper group 7 (4%) are less represented in the metal of Roman Hispania<sup>22</sup> (see [Tables 3&4](#), below).

As comparative references on the composition of these enamelled bowls, we have the published data on the Scremby Cup.<sup>23</sup> Although the results are heterogeneous in the presence/absence of elements such as arsenic and silver, they appear to have been obtained from the patina without cleaning, as suggested by the high iron content (>2%). This would affect the proportions of tin and lead, which are too high in the two samples taken from the bowl's body, as the authors acknowledge. The composition of the base is most like that of the Berlanga Cup. However, the distinguishing feature in the composition between the Scremby Cup and the Berlanga Cup is the high presence of arsenic in the former. The composition with silver, antimony and arsenic forms group 12 (CG12), which is absent in Roman metal from Britain. This difference could support doubts about the British origin of the Scremby Cup and could suggest Gallic manufacture at a later date (second half of the third century A.D., according to the parallels presented by Willmott *et al.*<sup>24</sup>). Although it is a cup decorated with enamels, it does not belong to the Hadrian's Wall series, which, based on the description of the Berlanga piece, does fit in with the artefacts found in Britain in the second century A.D.

As for the enamels ([Table 3](#)), the analyses provide qualitative information on the presence of certain elements in the glass based on colour. The three main elements are silica (Si), aluminium (Al) and calcium (Ca), which show similar proportions, as does the potassium (K) content. The differences are identified in higher iron values in the red enamel, the presence of magnesium (Mg), cobalt (Co) and antimony (Sb) in blue, and a higher concentration of copper and arsenic in green. The copper, tin and lead contents may be affected by the underlying metal, as the thickness preserved in each colour is different. However,

<sup>19</sup> Pollard *et al.* 2015.

<sup>20</sup> Jouttijärvi 2017.

<sup>21</sup> Pollard *et al.* 2015; Dungworth 1997.

<sup>22</sup> Montero Ruiz and Orejas 2018.

<sup>23</sup> Willmott *et al.* 2024, table 1.

<sup>24</sup> Willmott *et al.* 2024, 512.

**Table 2.** Elemental composition obtained by pXRF in the metal of the bowl. Values expressed as % by weight. LOD: Limit Of Detection.

| Analysis | Notes  | Fe   | Co   | Ni   | Cu   | Zn   | As   | Ag   | Sn   | Sb   | Au   | Pb   | Bi   |
|----------|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| PA3236I  | Patina | 1.21 | <LOD | 0.03 | 54.2 | 3.68 | 0.04 | 0.19 | 17.5 | 0.22 | <LOD | 22.7 | <LOD |
| PA3236IB | Clean  | 0.61 | <LOD | 0.04 | 75.9 | 3.00 | 0.08 | 0.21 | 9.35 | 0.18 | <LOD | 10.5 | <LOD |

**Table 3.** Analysis of enamels with values expressed in parts per million (ppm). LOD: Below Limit Of Detection. LE: Light Elements.

| Analysis        | Colour        | LE        | Mg        | Al        | Si        | P         | S         | K         | Ca        | Ti        | V         | Cr        | Mn        | Fe        | Co   |
|-----------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|
| PA3236IE        | Red Enamel    | 710606    | <LOD      | 21211     | 153332    | 862       | 11502     | 3490      | 24,856    | 529       | 111       | 93        | 1955      | 11,447    | <LOD |
| PA3236IF        | Blue Enamel   | 677406    | 3401      | 21337     | 186649    | 165       | 4175      | 3130      | 39,393    | 1137      | 115       | 69        | 3859      | 9197      | 1206 |
| PA3236IG        | Green Enamel  | 568914    | <LOD      | 21369     | 164131    | 1388      | 19,927    | 2913      | 31,372    | 555       | 188       | 200       | 4062      | 7757      | 100  |
| <b>Analysis</b> | <b>Colour</b> | <b>Ni</b> | <b>Cu</b> | <b>Zn</b> | <b>As</b> | <b>Sr</b> | <b>Ag</b> | <b>Cd</b> | <b>Sn</b> | <b>Sb</b> | <b>Ba</b> | <b>Hg</b> | <b>Pb</b> | <b>Bi</b> |      |
| PA3236IE        | Red Enamel    | 15        | 25787     | 1749      | <LOD      | 508       | 102       | <LOD      | 5642      | 2859      | 327       | <LOD      | 20654     | <LOD      |      |
| PA3236IF        | Blue Enamel   | 177       | 8902      | 434       | <LOD      | 433       | 89        | <LOD      | 3322      | 16237     | 585       | <LOD      | 16258     | 122       |      |
| PA3236IG        | Green Enamel  | <LOD      | 93984     | 4171      | 1191      | 448       | 170       | <LOD      | 15,500    | 1684      | 457       | <LOD      | 56032     | 219       |      |

**Table 4.** Lead isotope analysis of Berlanga bowl and the standard used to calibrate the analysis by MC-ICP-MS.

| Sample | 206Pb/204Pb | 2SE     | 207Pb/204Pb | 2SE     | 208Pb/204Pb | 2SE     | 207Pb/206Pb | 2SE      | 208Pb/206Pb | 2SE     |
|--------|-------------|---------|-------------|---------|-------------|---------|-------------|----------|-------------|---------|
| Bowl   | 18.45982    | 0.00056 | 15.64854    | 0.00048 | 38.5274     | 0.00137 | 0.84771     | 0.000007 | 2.087095    | 0.00003 |
| NBS981 | 16.94131    | 0.00047 | 15.49975    | 0.00049 | 36.72488    | 0.00158 | 0.914896    | 0.000016 | 2.167769    | 0.00005 |

**Table 5.** Closest matches (Euclidean distance) to the Berlanga Cup obtained with the AMALIA algorithm.

| DB ID       | Ref. no./Orig. ID | Location   | Country | Euclidean Distance | Material |
|-------------|-------------------|--|---------|--------------------|----------|
| UDATA1      | Berlanga bowl     |  |         | 0                  |          |
| AMALIA11460 | Villers-en-Fagnes | Villers-en-Fagnes, Philippeville                   | Belgium | 0.008              | Galena   |
| AMALIA10942 | 83.41 G.M836      | Trecastell mine, Conway                            | Wales   | 0.009              | Galena   |
| AMALIA1522  | RN7               | Ladywash mine, Eyam, Derbyshire                    | England | 0.01               | Galena   |
| AMALIA1561  | AP 92.18          | Brownley Hill mine, North Pennines                 | England | 0.012              | Galena   |
| AMALIA1569  | BN16 11570        | Flushiemere mine dump, Teesdale, Middleton, Durham | England | 0.031              | Galena   |
| AMALIA1555  | GEB-4             | Great Egglehope Beck, Teesdale, Durham             | England | 0.031              | Galena   |
| AMALIA1548  | MGV-1             | Middlegrove Vein, Weardale, Durham                 | England | 0.035              | Galena   |
| AMALIA1564  | BN13 6580         | Cow Green mine, Teesdale, Durham                   | England | 0.037              | Galena   |

the magnesium, cobalt and antimony in the blue colour are different from those in the red and green.

To confirm the origin of the cup's manufacture, a sample was collected and sent to the geochemistry laboratory at Durham University for lead isotope analysis using coupled plasma mass spectrometry (MC-ICP-MS). The results obtained (Table 4), and the high presence of alloyed lead in the metal, indicate that this lead may come from British mines located in the north of England.

The AMALIA algorithm<sup>25</sup> suggests that mines in England or Wales are the best potential source of lead (Table 5 and Fig. 5). Although specific information about Roman works in these mines is not well known, the Romans mined lead from the Mendips, Derbyshire, Durham and Northumberland since the beginning of their presence in the British Isles, and British lead production increased in the second and early third centuries.<sup>26</sup> The isotopic field of the North Pennines and Durham mines, as well as those in Wales, based on available data, suggests these regions as possible sources of the lead. The graphical distribution of the lead mines around the value of the bowl confirms what is suggested by the algorithm. It is not possible to give further precision as to which of the three regions could have provided the lead due to overlapping areas, but the geographical proximity of the North Pennines and Durham mines to Hadrian's Wall could be an argument in favour.

### 3D virtualisation of the Berlanga Cup

Over recent decades, three-dimensional documentation of heritage assets has become an indispensable technique for studying archaeological artefacts and sites. As early as 2006, the London Charter<sup>27</sup> called for rigorous three-dimensional visualisation that would contribute fully to the study, interpretation and management of cultural property. Years later, the importance of detailed three-dimensional documentation of heritage was emphasised in the Seville Principles.<sup>28</sup>

It was decided that a digital twin of the four individual fragments of the Berlanga cup was essential (Fig. 6). A data capture strategy was designed using the Foldio 3 light box and its automated motorised rotating base, which enables consistent, high-quality image capture. This was done with a 61 Mp Sony A7R-IV camera, mounted with a Sony FE 90mm F.28 macro lens. Colour calibration was performed using an X-Rite ColorChecker Passport to ensure the original piece's colours were preserved in the digital twin. The images were processed in Agisoft Metashape 2.2, yielding four high-quality 3D models that accurately reflect both the geometry (with sub-millimetre precision) and the colours of the fragments of the piece.

Given the fragmentary and deformed state of the different parts of the cup, this was necessary to understand the piece as a whole and visualise its original state. The 3D visualisation reassembled the fragments in their original position and restored them to their previous shape prior to their post-depositional disfigurement (Fig. 6). ZBrush 2025 and Adobe Substance 3D Painter 2025 were used to optimise each fragment, and subsequently, using animation techniques, the deformed pieces were unfolded in Blender 4.4. This made it possible to obtain the original shape of the piece and thus determine: (1) the diameters of its base (4.95 cm) and mouth (11.34 cm); (2) the height of the piece (7.89 cm); (3) the proportion of the piece's surface area that has been preserved (91%). Likewise, thanks to the digital twin, it was possible to unfold the entire surface of the piece onto a plane, obtaining an

<sup>25</sup> Rodríguez *et al.* 2023.

<sup>26</sup> Mattingly and Schrüfer-Kolb 2003.

<sup>27</sup> Beacham *et al.* 2011.

<sup>28</sup> Spanish Society of Virtual Archaeology, 'Seville Principles. International Principles of Virtual Archaeology', 2012, <http://smarthheritage.com/wp-content/uploads/2016/06/PRINCIPIOS-DE-SEVILLA.pdf>

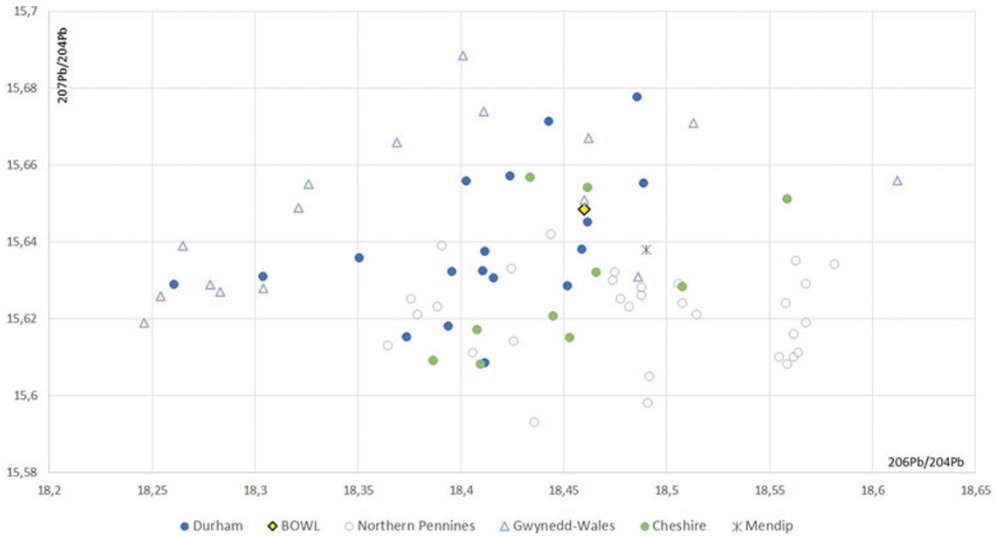


Fig. 5. Lead isotopes of the Berlanga bowl compared with the lead mines in the UK.

orthoimage that allows for a better understanding of the decoration and the upper inscription on the piece (Fig. 4). This technology allows a better understanding of the epigraphy thanks to the combination of high-quality photographic texture and a three-dimensional view of the surface of the cup. Such a digital twin is an improvement of the traditional drawing that, besides its technical accuracy, also introduces a subjective interpretation.

### Location and context of the find: the Roman site of ‘La Cerrada de Arroyo’ (Berlanga de Duero, Soria, Castilla y León, Spain)

The four fragments of the piece were found by chance on farmland just 100 metres from the town centre of Berlanga de Duero, a village in the province of Soria, located in the Ribera del Duero next to the Escalote river valley, a tributary of the Duero River (Fig. 1). However, this is not the first discovery of archaeological material or objects from the Roman period in this area.

#### Roman Berlanga

Berlanga de Duero has traditionally been identified with the ancient Roman settlement of Valeránica. This has been echoed by dozens of authors over the last two centuries, since Juan Manuel Bedoya mentioned it in his work ‘Memorias Históricas de Berlanga’ (Historical Memoirs of Berlanga).<sup>29</sup> However, they have always treated it as a starting point for their study and not as an aspect to be developed, given that it represented the beginning of Berlanga’s own origins. The historical basis for this assertion lies in the work *Historia de rebus Hispaniae* or *Historia Gothica* by the Archbishop of Toledo, Rodrigo Jiménez de Rada, written at the beginning of the thirteenth century. Jiménez de Rada, when mentioning Berlanga in his work, writes the following: ‘*Valeranicam quae nunc Verlanga dicitur*’. Some authors accept this etymology, such as Eleuterio Carracedo<sup>30</sup> who suggests that the name Berlanga comes

<sup>29</sup> Bedoya 1845, 9–10.

<sup>30</sup> Carracedo Arroyo 1996, 256.



Fig. 6. 3D virtualisation of the 'Berlanga Cup' (3D Stoa - Archaeology and Heritage). (1) Current state; (2) virtual reconstruction.

from 'the Latin VALERIANICA, derived from the very ancient Roman Genticulum VALERIUS'. In contrast, the philologist Álvaro Galmés<sup>31</sup> considers that the name Berlanga 'is a compound word made up of *ber* and *langa*', the first deriving from the Iberian-Basque root 'valle' (valley) and the second element corresponding to the Celtic root *lanka* 'fold in the terrain, valley', concluding that it is an Iberian-Celtic tautology. In our opinion, we are cautious about accepting *Valerianica* as the original name from which Berlanga derives, as this mention is nothing more than a late piece of information recorded only by Jiménez de Rada.

At the archaeological level, the study of the Roman population in Berlanga is still in its infancy, since, although findings from this period have been documented, they are of little significance and have been found in a scattered manner. To date, three archaeological interventions have documented Roman remains around the centre of Berlanga. The first

<sup>31</sup> Galmés de Fuentes 2000, 24.

was carried out in the gardens of the palace of the Marquises of Berlanga,<sup>32</sup> the second in the palace tower<sup>33</sup> and the last in La Cerrada de Arroyo, all of them in an 11-hectare area, part of which is in the modern town centre.<sup>34</sup>

The first two interventions confirmed the existence of Roman remains in the palace of the Marquises of Berlanga and the surrounding areas, consisting of a collection of fragments of indigenous *sigillata* and Roman pottery dating from around the first century A.D.<sup>35</sup> and a sedimentary deposit at the base of the palace tower.<sup>36</sup> The latest archaeological excavation was carried out on a plot of land called 'La Cerrada de Arroyo', some 200 metres south of the previous interventions. There, in the test pits opened in the southern part of the plot, remains of High Imperial Hispano-Roman material culture and two masonry stone walls, which appeared to correspond to the same chronological horizon, were documented. However, the intervention was unable to document a continuity between the remains found in La Cerrada de Arroyo and those recovered in the excavations around the palace of the Marquises of Berlanga since, in contrast to the positive results of the test pits carried out in the south of the plot, the surveys carried out in the northern half were unable to document any remains from the Roman period. Therefore, archaeological documentation work is still necessary to ascertain the true dimensions of the site and whether or not there was continuity of settlement between the two areas recognised as having been occupied by the Romans in Berlanga.

### Surveying in La Cerrada de Arroyo

The discovery of the Berlanga Cup has led to prospecting work being carried out on the plot where the find was made. A ground-penetrating radar survey has been conducted to assess the site typology (habitat, necropolis, etc.) and a surface survey to collect materials in order to analyse whether there was a settlement which coincided chronologically with the cup. This consisted of photogrammetry of the plot where the fragments of the cup appeared, on which a grid has been drawn to locate the materials collected on the surface and geo-reference the geophysical survey carried out with GPR, which has made it possible to establish the spread of settlement. Likewise, historical photographic series from different flight plans carried out in Castilla and León were analysed to document the presence of cropmarks, a research procedure common to the study of other sites in the region.

The geophysical survey was carried out using a 250 MHz Noggin single-channel ground-penetrating radar (Sensor and Software) mounted on a SmartCart system and a Topcon RTK GPS connection to ensure the georeferencing of the data. The 250 MHz single-channel system used, as in other surveys carried out in the same area of the Duero Valley,<sup>37</sup> achieved a balance between penetration and data definition. The choice of the ground-penetrating radar method to contextualise the site was based firstly on the lack of knowledge of the location of the structures despite the existence of several previous surveys, and secondly on the presence of metal fences separating the fields, which makes the application of other geophysical methods based on differential magnetisation of the subsoil inadvisable. Data collection was carried out by surveying GPS-georeferenced longitudinal profiles, with a distance of 20–25 cm between them. However, some areas could not be examined due to the roughness of the terrain. The data processing was carried out using EkkoProject v.5.0. Devouw, Envelope, and Migration of the data were performed.

<sup>32</sup> Balado Pachón 2000.

<sup>33</sup> Lerín *et al.* 2005.

<sup>34</sup> Tarancón *et al.* 2017.

<sup>35</sup> Balado Pachón 2000.

<sup>36</sup> Lerín *et al.* 2005.

<sup>37</sup> García Sanchez and Costa-García 2021; García Sanchez and Simón 2021.

The GPR survey clearly identified a small group of buildings, although only partially, given the exploratory nature of this first survey (Fig. 7). Specifically, we observed a first rectangular building approximately 17 m long by 14 m wide, with rooms on both sides of the long side and preserved flooring in one of the rooms. Immediately to the south of this first building, we observed a room ending in an apse and a small annex, probably divided into two rooms. Although relevant, the results are still too partial to allow for a general interpretation of the site, although everything seems to indicate that we have located the corner of a larger complex. The main building, divided into several small rooms, or *cubicula*, could indicate a rural agricultural function, to which other elements would have been added in later periods, such as the room equipped with a small apse.

On the other hand, the archaeological surface survey involved the collection and quantification of diagnostic material on an intra-site scale, a methodology that allows for study of the chronology and possible functionality of the archaeological site, as well as providing contextual information for a better interpretation of the site, as is customary in archaeological surveys in the Mediterranean region.<sup>38</sup> This has been carried out in an area conditioned by the location of the find and by the type of terrain and its current division. In this regard, the fieldwork began at the site where the piece was found and an intensive visual survey was carried out to the east, as to the west there is land whose characteristics prevent the visualisation of materials on the surface. This space is currently divided by a metal fence, which influenced the ground survey grid as well as the visualisation of archaeological material on the surface. On the south side of the fence, materials are more abundant as ploughing has removed the strata on the arable land, while on the north side of the fence, archaeological pieces appear in smaller quantities due to a lack of agriculture. The grid established took the fence as its axis, from which 6 m squares were established on either side, collecting all the material inside for quantification and classification.

Regarding the materials recovered, the concentration of tiles in the south-western sector is noteworthy. Minor materials found include glass and slag remains, as well as fragments of handmade pottery, *terra sigillata* and earthenware. In contrast, a large quantity of pottery fragments was found from Roman productions 'of indigenous tradition'. This production is characterised by its orange paste and geometric and plant decorations painted in ochre tones (Fig. 8). The latter provide information about a chrono-cultural horizon linked to the Roman world between the second and fourth centuries A.D., as they resemble the pieces found in other nearby sites in Soria, such as Tiermes (Montejo de Tiermes), Uxama (El Burgo de Osma-Ciudad de Osma) and Tarancueña,<sup>39</sup> all of which coincide with the chronology of the Berlanga Cup. It is noteworthy that there is hardly any handmade and common pottery, which was generally used for storage and cooking, in contrast to the large presence of tableware in the indigenous tradition.

The survey carried out on this land belonging to La Cerrada de Arroyo indicates that there are structures compatible with a permanent settlement, which may have preserved paving and are reminiscent of other Roman-era habitats. This, together with the materials recovered, raises the possibility that it was a rural *villa*-type settlement which may have been in use during the first to fourth centuries A.D.

### The Hadrian's Wall Pans in light of the new find in Berlanga

The discovery in Berlanga has enabled completion of the existing information on Hadrian's Wall Pans and the hypotheses regarding their origin and functionality. In this sense, the study and comparison with other pieces of this type have provided a better understanding

<sup>38</sup> Reid *et al.* 1975; Bintliff 2013; Attema *et al.* 2020.

<sup>39</sup> De la Casa Martínez *et al.* 1994, 36; García Merino 1995, 31–2; Abascal Palazón 1986.



Fig. 7. La Cerrada de Arroyo (Berlanga de Duero, Soria). Results of the geophysical survey. (Jesús García).

of their characteristics, reinforced the idea that they were not a set, and provided expanded information about the Spanish military presence at the Wall.

### *The craftsmen of the Hadrian's Wall pans in light of the Berlanga piece*

In 1935, J.D. Cowen and I.A. Richmond<sup>40</sup> proposed that the Rudge Cup and the Hildburgh fragment were part of a set of three pieces, in which the former covered the western sector of the Wall, while the other two (which the authors hoped would be found in the future) would name the forts in the central and eastern sectors. This proposal began to be questioned by some authors when other *paterna* vessels were found covering the same sector and, above all, adding some names. Along these lines, Allason-Jones indicated 'that we now have three similar vessels, all of which cover the western sector, may suggest that there never

<sup>40</sup> Cowen and Richmond 1935, 311.



Fig. 8. Assemblage of Roman 'indigenous tradition' pottery recovered during the surface survey. (Photograph: Susana De Luis).

was such a set'.<sup>41</sup> Other researchers even doubted the existence of pieces bearing the names of the eastern forts of the wall. Likewise, Künzl, in order to explain the absence of forts on the eastern side, proposed that the vessels without inscriptions could refer to the section of the wall between Bowness-on-Solway and Wallsend.<sup>42</sup> Now, the Berlanga discovery allows us to resolve some of the doubts that arose in the past and to put forward new hypotheses.

In line with the opinion of most researchers, we believe that the cups were not part of a set, even though the Berlanga Cup bears the names of the forts on the eastern end of the Wall: firstly, because if they had been part of a set, each of these cups would have had the same names, which is not the case in the three cups known to date with inscriptions. Secondly, the morphological and ornamental characteristics are different from one another, which would not give uniformity to a hypothetical set. Thirdly, these pieces have been found individually, with no material evidence of a second or even third piece. Finally, the absence of the *Pons Aelius* and *Segedunum* forts on the Berlanga Cup is decisive, as it does not connect with any of the three cups known to date (which means we cannot say that it corresponds to a central section), nor does it complete the supposed eastern section of the Wall. However, even though *Pons Aelius* may not have been built at the time the Berlanga Cup was made, *Segedunum* should have already existed.<sup>43</sup>

<sup>41</sup> Allason-Jones 2012a, 30.

<sup>42</sup> Künzl 2012, 20.

<sup>43</sup> Breeze and Dobson 2000, 47-63, 85 and 131-3, table 3, figs 11 and 23.

All this, in addition to indicating that there were probably no sets covering the Wall in sections, highlights the fact that these pieces were created *ex professo*. In other words, these pans were most likely manufactured, or rather finished, to order by craftsmen specialising in the manufacture of enamelled bronze vessels, with Carlisle as one of the suggested places of manufacture in the case of the Ilam Pan.<sup>44</sup> These craftsmen, in keeping with the tradition of enamel manufacturing in pre-Roman Britain and the results of the isotope analyses seen earlier in this article, had their workshops somewhere in *Britannia*. We know that, during the Empire, Britain was a place where this type of production was carried out by metalworkers,<sup>45</sup> some of whom travelled to different parts of the Empire, such as Germania, Gaul and Hispania.<sup>46</sup> The decorative motifs and enamels on other objects and products, such as the pateras, the alabastrons, the jugs, the flasks and the cockerels.<sup>47</sup> are similar to those on the Hadrian's Wall pans. This suggests that they all came from the same workshops and that the metalworkers who made the pans may have created these pieces prior to their commission, while also making others of different shapes, such as canteens, and finished them with the names requested by the buyers.

In this regard, at first glance and after analysing Berlanga's cup with a binocular magnifying glass, mould casting can be seen in the decoration, while the inscription of the letters was most likely added later using the incision technique, even though in other cups of the series the lettering was cast with the vessel. This further reinforces our idea that the body of the cup was made first, then the bronze was finished, the letters were engraved at the buyer's request, and finally, the enamel was applied.

### **The Berlanga Cup and its relationship with the Roman auxiliary units of Hadrian's Wall**

Heurgon was the first to point out the possible relationship between the patera from Hadrian's Wall and the Roman military following the discovery in Amiens, stating 'no doubt they were made for the Army on the Wall, and that the soldiers were pleased to take them back in their baggage when they went home'.<sup>48</sup> He proposed this link for both the Hildburgh fragment and the Amiens patera: 'The Hildburgh fragment, which was found in Spain, between Leon and Zamora, may have belonged to an officer of the *Cohors I Asturum*. It is interesting that Amiens, where a *primipilus* of the *Legio VI Victrix* has left his epitaph (*CIL* XIII, 3497) and which was to see, in A.D. 208, some *vexillarii euntes in expeditionem Britannicam* [...]'.<sup>49</sup> The Berlanga Cup, in line with Heurgon's proposal, now joins the Hildburgh fragment as possible evidence of this relationship between the paterae and the *auxilia* or legions stationed on Hadrian's Wall whose soldiers returned to their places of origin. In this sense, the two Hispanic pieces can be related to the Roman auxiliary units of Hispanic origin that fought at Hadrian's Wall and are known thanks to epigraphy: the *Ala I Asturum*, the *Ala II Asturum Hispanorum* and the *Cohors I Celtiberorum*.<sup>50</sup>

The Berlanga Cup can be linked to the *Cohors I Celtiberorum* (CIC) and its presence in Britain, specifically at Hadrian's Wall. This cohort was present in three provinces in the west of the Empire: *Hispania Citerior*, *Mauretania Tingitana* and *Britannia*. It existed from the end of the first century to the fourth century A.D., although most epigraphic references

<sup>44</sup> Breeze and Flügel 2021, 52.

<sup>45</sup> Künzl 2012, 12–22.

<sup>46</sup> Also, from Belgida (Valencia) comes an enamelled bronze canteen (Palol 1987) and from Tardajos (Burgos) an unpublished brooch with the same enamelled scale decoration (Museo de Burgos, Invent. Num. 8895/14).

<sup>47</sup> Künzl 2012, 12–18.

<sup>48</sup> Heurgon 1951, 24.

<sup>49</sup> Heurgon 1951, 24.

<sup>50</sup> Meyer 2013.

refer to the second century A.D.<sup>51</sup> In fact, this regiment of the Roman army is attested in the British Isles during the second century A.D., specifically before, during and after the construction of the Wall. This contingent was made up of troops from *Celtiberia*, precisely the area where the piece in question was found. The relationship between the Celtiberian territory and the soldiers who formed part of the CIC is reflected in the hospitality token from Castromao (Ourense, Galicia), dated to 132 A.D.<sup>52</sup> This mentions a prefect of the *Cohors I Celtiberorum* named *C. Antonius Aquilus Nouaugustanus* whose city of origin was *Nova Augusta*, now Lara de los Infantes (Burgos). This new foundation, dated from the Augustan period (1 A.D.), is located in the Celtiberian territory at the headwaters of the Duero River, which would underline the feasible geographical origin of the unit, at least in its early days.

Thanks to epigraphic sources, we know that this cohort was stationed near Hadrian's Wall during the reign of Emperor Trajan, a fact attested to by several diplomas, notably that of Sydenham,<sup>53</sup> and one that places its stay in Stannington, in Yorkshire, during Hadrian's reign.<sup>54</sup> However, the most important diploma, which can most clearly link the Berlanga Cup with Roman military units, is the one found in Chesters<sup>55</sup> or *Cilurnum*, a place located in the eastern part of the Wall and which is mentioned on the Berlanga Cup. This diploma, dated 145 or 146 A.D. during the reign of Antoninus Pius, is a recognition of the services rendered around Hadrian's Wall to three *alae* and eleven cohorts, including *Cohors I Celtiberorum*. However, other diplomas that also mention the *cohors* have been found in other areas, such as the one from Kamorom, in Upper Pannonia.<sup>56</sup>

Evidence of members who belonged to this cohort in *Celtiberia* is more elusive, but some epigraphic references indicate that veterans returned to the *Celtiberia* area after serving in Britannia and other provinces (*Hispania*, *Mauretania Tingitana*, *Thracia*) following their participation in various campaigns or activities related to the control of mining resources.<sup>57</sup> In this regard, funerary inscriptions of military personnel have been preserved, such as the one from Montejo de Tiermes (Soria),<sup>58</sup> which mentions *Gaio Iulio Pomp[—]*, military tribune of an unnamed *Cohors*. This inscription is dated between 100 and 150 A.D., a period of significant activity for the *Cohors I Celtiberorum* in Britannia and other locations. Three *trullae* (Inv. 14942, 24899, 24900 in *Hisp. Epi.*) also come from Montejo de Tiermes. These were a type of item that formed part of the legionary equipment and were used for cooking. However, the examples cited are made of silver, which suggests that they may have served a different purpose, similar to that of the patera or cups of the type discussed in this article, acting as a reminder of their owners' military past; although we cannot rule out the possibility that they were simply part of a luxury tableware set, as *trullae* were made not only from copper alloys, but also from other materials such as *terra sigillata* (Hisp. 81).<sup>59</sup> Another inscription from San Esteban de Gormaz (Soria) mentions another cohort prefect,<sup>60</sup> Marco Magius Antiquus, in this case a member of the *Cilicum* cohort.<sup>61</sup> Although not directly related to the members of *Cohors I Celtiberorum*, the case of Marco Magius is equally illustrative of the return of members of auxiliary units to their possible places of origin. Finally, we must mention two stelae from Soria. First, the stele of *Bodeius* (Inv. 74/8/1, Museo Numantino), which

<sup>51</sup> Aja Sánchez 2007, 24–7; Costa-García 2009.

<sup>52</sup> AE 1972, 282; Costa-García 2009, 206.

<sup>53</sup> CIL XVI, 51 = RIB 2401.2.

<sup>54</sup> CIL XVI, 70 (p. 215) = RIB-02-01, 2401.06.

<sup>55</sup> CIL XVI, 93 (p. 215) = RIB-02-01, 2401.10

<sup>56</sup> CIL XVI, 69.

<sup>57</sup> G(aiol) Iulio [3] / Pomp[3] / praef(ecto) coho[rtis 3] / trib(uno) mil(itum) l[eg]ionis

<sup>58</sup> CIL II, 05794.

<sup>59</sup> Sáenz Preciado and Sáenz Preciado 2023.

<sup>60</sup> M(arcus) Magio M(arcus) f(ilius) Ga[l(eria)] / Antiquo praef(ecto) / cohor(tis) Cil(icum).

<sup>61</sup> ERPSoria 131 = EE-08-02. 00144.

shows a man on horseback and whose inscription only indicates his name in Latin letters; and two recently published stelae from Borobia, stored at Museo Numantino (Inv. 74/8/3) and which present two cavalry warriors, one at each face of the epigraph. The authors discussed the connection between the traditional horse-mounted warfare of the indigenous people of Celtiberia, chiefly the *Arevacii*.<sup>62</sup> Those individuals (bearing indigenous *nomina* and *cognomina*) as parts of mounted auxiliary units (*cohors equitata*) recruited from that area, continued using similar symbology during their military service in other parts of the Roman empire. The mention of a third individual in the inscription from Borobia,<sup>63</sup> not related to the deceased, has been interpreted as a last favour by a ‘brother of arms’, who dedicated the stelae to a fellow veteran in absence of other family.

Indeed, the CIC and the *Ala I Hispanorum Aravacorum*<sup>64</sup> are good examples of this attested relationship between Celtiberian indigenous people and Roman auxiliary units in different parts of the empire.

In this regard, we could also relate the other piece found in Hispania to veterans returning to their homeland after service in the auxiliary units. The region of Zamora-León (in the north-western part of the peninsula), where the Hildburgh fragment was found, was feasi- bly the recruiting area for two units that were stationed at Hadrian’s Wall: the *Ala I Asturum* and the *Ala II Asturum Hispanorum*. For the second unit, we have several notable epigraphic references. Among them is the stele of *Pintamus/Pintaius*.<sup>65</sup> *sesquiplicarius* and horseman of the *Ala II Asturum Hispanorum*, member of the Zoelas tribe.<sup>66</sup> The Zoelas are mentioned as a *gens* or administrative unit in the Table of Hospitality of Astorga, also known as the ‘Pact of the Zoelas’<sup>67</sup> and located on the borders of the provinces of Lusitania and Hispania Citerior. Some authors<sup>68</sup> also link this *Ala* to the inscription found in Gijón (Asturias, Spain) which mentions a *gens Cilurnigorum* that they relate to the fort of *Cilurnum* (located on the Wall), occupied, according to epigraphic evidence, by a unit of Asturians.<sup>69</sup> We can put forward a new argument concerning the relationship between soldiers of Asturian origin, or those who fought in the ranks of these auxiliary units and the Hildburgh fragment and the Berlanga Cup. We have evidence of the presence of the *Ala II Asturum Hispanorum* in *Bremetennacum* (now Ribchester) and we know that they later settled in *Cilurnum* (Chesters), where it would serve until the end of the empire, according to the *Notitia Dignitatum*. For its part, the *Ala I Asturum Hispanorum* was stationed in *Condercum*. These are two places, *Cilurnum* and *Condercum*, mentioned on the Berlanga Cup.

### **What were the Hadrian’s Wall Pans and for whom were they made? Proposals based on the Berlanga Cup**

In 1949, following the discovery of a new patera in Amiens, Heurgon considered these pieces to be a ‘souvenir de guerre’,<sup>70</sup> a material reminder for soldiers returning home of

<sup>62</sup> Chordá Pérez *et al.* 2025.

<sup>63</sup> Sáenz Preciado and Sáenz Preciado 2023.

<sup>64</sup> Spaul 1994, 31–3.

<sup>65</sup> Not to be confused with the *signifer* Pintaius, son of Pedicili, of Astur Trasmontano origin and, more specifically, from *Castello Intercatia*, who was a veteran of the *Cohors V Asturum* (CIL XIII, 8098 = AE 2002, 1034), a cohort that served entirely in Germania.

<sup>66</sup> RHP 00052 = Hernandez-01, 00030. [Ti(berius)] Claudius / [3]onis f(i)lius Pint/[am]us(?) [(sesquiplicarius) natione / [Zoe]la eques alae / [Astur(um) i]i ann(or)um LIII stip(endiorum) / [

<sup>67</sup> CIL II, 2633. Santos Yanguas 1985, 11; González Rodríguez 1997, 79; Beltrán Lloris 1994, 101–2.

<sup>68</sup> Fernández Ochoa and Morillo Cerdán 1997.

<sup>69</sup> RIB 2401.10 from Chesters and RIB 2401.32 from Sydenham.

<sup>70</sup> Heurgon 1949, 128; 1951, 24.

their passage through the northern border of the Empire and through such an emblematic construction as Hadrian's Wall. In recent years, their designation as *souvenirs* or *mementos*, ultimately objects of memory, has become established,<sup>71</sup> while some publications also point to votive use of some examples, i.e. the Ilam Pan.<sup>72</sup> In this sense, we agree with the designation of 'souvenir' or 'memento'; however, we do not believe that these were souvenirs that merely commemorated a visit to the structure, but rather that behind this 'memento' there was an experience lived by its bearer/owner. If the pieces had been acquired by a simple visitor, they would not mention forts on one section or another of the Wall, but would have a generic inscription referring to the entire construction. Moreover, the names of the forts were probably not well known outside Britain, whereas the Wall was widely recognised. In addition, the inscriptions would not have been made after the casting of the pateras, but at the same time. The Berlanga Cup could be linked to a veteran soldier, either from *Cohors I Celtiberorum* or from some other legion or auxiliary unit, who returned to his place of origin linking places as far apart as Berlanga and Hadrian's Wall. This, as well as the other Hadrian's Wall pans, could have been a souvenir acquired by a veteran before his return home, purchased with the aim of remembering his time and service at one of the monumental frontiers of the Empire. Similarly, we cannot rule out the possibility that these pieces were a recognition or distinction for those who served on the Wall during their military career or who may have carried out some act of special relevance, and that the piece was a material reminder of that event.<sup>73</sup> This would suggest that the purchaser and the owner of the piece were different people. This recognition could have been official, as was the case with the cohorts and *alae* of the diploma from *Cilurnum* Chesters,<sup>74</sup> or it could have been granted unofficially by their own comrades. In fact, it is no coincidence that these pieces are shaped like *trullae*, an object characteristic of Roman military equipment (as it appears in the reliefs of Trajan's Column), but which would evoke not war and moments of danger, as weapons might do, but rather camaraderie among comrades and everyday life. This would have been done with the gift of a patera representing the Wall seen from the inside (Fig. 4), as these pieces depict the forts listed as if seen from within, as if the bearer had been part of the defence of the Wall in those forts.

Given the possibility that the owner and the buyer were different people, the Bath find could be interpreted as an offering from a Roman soldier or officer to the goddess *Sulis Minerva*, to whom he offered his military career and his actions in favour of the empire and its ideals in exchange for the favour of the deity.

Therefore, everything seems to indicate that the ultimate recipients of these pans were Roman soldiers or retired veterans,<sup>75</sup> rather than visitors or pilgrims to the Wall, as argued by Henig,<sup>76</sup> who carried these objects with them on their return home, sometimes transporting them far from Britain and the Wall.

We are still far from being able to state categorically what the purpose of the Berlanga Cup and the other patera from Hadrian's Wall was, who their recipients were or what other messages they contain, and we are still confined to hypotheses that have yet to be refuted. We can, however, raise new questions regarding the mention of certain forts. Does the mention of certain forts provide information about the 'jurisdiction' that an officer had over them? Could these pieces reveal some features of how the Wall functioned? Were they the forts where an officer or soldier had developed their career? The discovery of a new patera from Hadrian's Wall in Berlanga de Duero brings us a little closer to solving these issues.

<sup>71</sup> Cunliffe 1988; Henig 2010, 13; Breeze 2012b, 109; 2012c; Cassibry 2021, 119; Popkin 2022, 70–92.

<sup>72</sup> Breeze *et al.* 2022.

<sup>73</sup> Breeze 2012b, 110.

<sup>74</sup> RIB 2401.10.

<sup>75</sup> Breeze 2012b, 109.

<sup>76</sup> Henig 2010, 15.

## Chronology

Proposing a chronological framework more precise than the rather general attribution to the second century A.D.<sup>77</sup> is difficult for the Berlanga Cup, as well as for the other cups of the series. Some proposals attempt to refine the period of manufacture and use of these objects to between A.D. 122 and 150 on the basis of typology and epigraphy,<sup>78</sup> however, this refinement does not appear to be applicable to the Berlanga Cup.

In other cups of the series, the presence or absence of specific forts helps to refine the chronology, as in the case of the Ilam Pan, where the absence of *Aballava* (Burgh-by-Sands) and the mention of *Cobbagata* (Drumburg)<sup>79</sup> are chronologically informative. By contrast, the Berlanga Cup lists a series of fort names located in the easternmost sector of Hadrian's Wall — *Cilurnum*, *Onno*, *Vindobala* and *Condercom* — all of which were constructed before A.D. 130<sup>80</sup>, and no additional forts were built in this area in the following centuries. Had the cup included the names of forts situated east of *Condercom* (Benwell), it could greatly have contributed to refining the chronology. In such a hypothetical scenario, the presence of *Pons Aelius* (Newcastle) would have placed the cup after A.D. 160, the date generally proposed for the foundation of that fort.<sup>81</sup> Conversely, the inclusion of the easternmost fort, *Segedunum* (Wallsend), together with the absence of *Pons Aelius*, might have suggested a date before A.D. 160.

Nevertheless, the only securely dated elements that assist in proposing a chronology are the construction of *Condercom* (Benwell) between A.D. 124 and 130<sup>82</sup> and the fire that destroyed *Vindobala* (Rudchester) and *Onno* (Halton Chesters) at the beginning of the second century A.D.<sup>83</sup> Consequently, the selection of fort names inscribed on the Berlanga Cup, together with the termination of the inscription with four crescents or Ds, allows us to suggest a date between A.D. 124 and the end of the second century A.D.

## Conclusions

The discovery of the Berlanga Cup is a find of substantial importance for the study of many different topics, both concerning Hadrian's Wall, but equally the materiality of the Roman army, the incorporation of the indigenous population of the Iberian Peninsula into the political and military machinery of the Roman Empire, and, moreover, the everyday lives of many inhabitants of the empire, whose lived experience involved serving in the army and returning to their places of origin.

We can conclude that the Berlanga Cup was manufactured in the north of Britain, using local materials, as shown by the isotopic analysis. It was commissioned or purchased by a Roman army officer, either as a souvenir or as a retirement gift, and then brought back to the *Celtiberic* region in *Hispania Citerior* — to an archaeological site that still exists today, as shown by a GPR survey, which could also be dated to the first to second centuries A.D. The manufacture and transport of the piece should have taken place between 124 and 150, perhaps between 130 and 150, if we assume the Ilam Pan predates the other elements of the series.

This study incorporates detailed research on the cup, from its physical and chemical composition, which certifies its place of production in the British Isles, to its study and

<sup>77</sup> Breeze 2012b, 107–8.

<sup>78</sup> Petrovsky 1993; Breeze and Flügel 2021, 52.

<sup>79</sup> Breeze and Flügel 2021, 47–51.

<sup>80</sup> Breeze and Dobson 2000, 47–56 and 84–5, fig. 11, tables 2 and 3.

<sup>81</sup> Breeze and Dobson 2000, fig. 23; Breeze 2006, 145.

<sup>82</sup> Breeze and Dobson 2000, 84; Breeze 2006, 75.

<sup>83</sup> Breeze and Dobson 2000, 134.

reconstruction using digital media and an epigraphic reading and interpretation of the piece that reveals, for the first time, references to the eastern forts of the Wall. Thanks to the fact that the find has quickly become part of an archaeological process, we have developed a research programme on the site where the piece was found, through artefactual and geophysical prospecting that has revealed part of the complex and archaeological site from where the cup came. This study of the Berlanga Cup will undoubtedly provoke numerous reactions, which we hope will contribute not only to knowledge of the piece and Hadrian's Wall, but also to the countless connections between the British Isles and the Iberian peninsula within the Roman Empire.

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### Abbreviations

|            |   |
|------------|---|
| AE         | <i>L'Année Epigraphique</i> 1972; 2002.   |
| CIL        | <i>Corpus Inscriptionum Latinarum</i> (II, XIII, XVI).  |
| EE         | <i>Ephemeris Epigraphica</i> .  |
| ERPSoria   | A. Jimeno 1980: <i>Roman Epigraphy of the Province of Soria</i> , Soria.  |
| Hernandez  | L. Hernández Guerra 2017: 'Geographical mobility. Hispanic auxiliaries and legionaries with mention of origo on the northern limes of the empire', in J.J. Ferrer-Maestro <i>et al.</i> (eds), <i>Entre los mundos. Tribute to Pedro Barceló</i> , Toulouse, 379–416. |
| Hisp. Epi. | <i>Hispania Epigraphica</i> online database.  |
| RIB        | <i>The Roman Inscriptions of Britain</i> (01: Inscriptions on Stone; 02: <i>Instrumentum Domesticum</i> ).  |
| RMD        | <i>Roman Military Diplomas</i>  |
| RHP        | B. Lörincz 2001: <i>The Roman Auxiliary Troops in Pannonia during the Principate. Part I. The Inscriptions</i> , Vienna.  |

### Bibliography

- Abascal Palazón, J. M. 1986: 'Un probable taller local de cerámica pintada tardorromana en Tarancueña (Soria)', *Lucentum* 5, 137–46.
- Aja Sánchez, J.R. 2007: 'La epigrafía de la Cohors I Celtiberorum', *Acta XII Congressus Internationalis Epigraphiae Graecae et Latinae*, 23–30.
- Allason-Jones, L. 2012a: 'The Rudge Cup', in Breeze 2012c, 23–36.
- Allason-Jones, L. 2012b: 'The Hildburgh fragment', in Breeze 2012c, 61–4.
- Attema, P., Bintliff, J., Van Leusen, P.M., Bes, P., De Hass, T., Donev, D., Jongman, W., Kaptjin, E., Mayoral Herrera, V., Menchelli, S., Pasquinnucci, M., Rosen, S., García Sánchez, J., Gutierrez Soler, L., Stone, D., Tol, G., Vermeulen, F. and Vionis, A. 2020: A guide to good practice in Mediterranean surface survey projects, *Journal of Greek Archaeology* 5, 1–62.
- Balado Pachón, A. 2000: *Informe de la intervención arqueológica preliminar en la Huerta Baja del Palacio de Berlanga de Duero (Soria)*. 1ª Fase, unpub. report, Servicio Territorial de Cultura de Soria.
- Beacham, R., Denard, H. and Niccolucci, F. 2011: 'An Introduction to the London Charter', <https://www.semanticscholar.org/paper/An-Introduction-to-the-London-Charter-Beacham-Denard/7ab58fe620910600ce11214e33475ae9623a9d52> (accessed October 2025).
- Bedoya, J.M. 1845: *Memorias Históricas de Berlanga*, 2nd edn, Orense.
- Beltrán Lloris, F. 1994: 'Parentesco y sociedad en la Hispania celtica (1 a. e.-HI d. e.)', in M.C. González Rodríguez and J. Santos Yanguas (eds), *Las estructuras sociales indígenas del Norte de la Península Ibérica*, Vitoria-Gasteiz.
- Bintliff, J. 2013: 'Intra-site artefact surveys', in C. Corsi, B. Slapšak and F. Vermeulen (eds), *Good Practice in Archaeological Diagnostics*, London, 193–207.
- Breeze, D.J. 2006: *J. Collingwood Bruce's Handbook to the Roman Wall*, Newcastle upon Tyne.
- Breeze, D.J. 2012a: 'Catalogue of the British pans', in Breeze 2012c, 1–7.

- Breeze, D.J. 2012b: 'Conclusions', in Breeze 2012c, 107–11.
- Breeze, D.J. (ed.) 2012c: *The First Souvenirs Enamelled vessels from Hadrian's Wall*, Kendal.
- Breeze, D.J. and Dobson, B. 2000: *Hadrian's Wall*, 4th edn, London.
- Breeze, D.J., and Flügel, C. 2021: 'A military surveyor's souvenir? The Ilam Pan', *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society* ser. 3, 21, 43–62.
- Breeze, D.J., Flügel, C. and Graafstal, E. 2022: 'The Ilam Pan. An alternative explanation for the omission on Aballava (Burgh-by-Sands)', *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society* ser. 3, 33, 196–205.
- Carracedo Arroyo, E. 1996: *Toponimia de la tierra de Soria*, Soria.
- Cassibry, K. 2021: *Destinations in Mind: Portraying Places on the Roman Empire's Souvenirs*, New York.
- Chordá Pérez, M., B. Díaz Ariño and A. Jiménez Carrera, 2025: 'Los guerreros de Borobia. Una nueva estela opistógrafa latina procedente de la provincia de Soria', *Archivo Español de Arqueología* 98, 758.
- Costa-García, J.M. 2009: 'Tras los pasos de la Cohors I Celtiberorum', *BSAA arqueología* 75, 201–22.
- Cowen, J.D. and Richmond, I.A. 1935: 'The Rudge Cup', *Archaeologia Aeliana* series 4, 12, 310–42.
- Cunliffe, B. (ed.) 1988: *The Temple of Sulis Minerva at Bath. Volume 2: The Finds from the Sacred Spring*, Oxford.
- De la Casa Martínez, C., Domenech Esteban, M., Izquierdo Bertiz, J.M. and Terés Navarro, E. 1994: *Tiernes III. Excavaciones realizadas en la ciudad romana y en las necrópolis medievales*, Madrid.
- Dungworth, B.D. 1997: 'Roman copper alloys: analysis of artefacts from northern Britain', *Journal of Archaeological Science* 24, 901–10.
- Fernández Ochoa, C. and Morillo Cerdán, A. 1997: 'Cilurnum (Chesters) and Ala II Asturum: a new epigraphic document relating to the Spanish origin of a military toponym in Britannia', in W. Groenman-van Waateringe, B.L. van Beek, W.J.H. Willems and S.L. Wynia (eds), *Roman Frontier Studies 1995: Proceedings of the XV International Congress of Roman Frontier Studies*, Oxford, 339–41.
- Galmés de Fuentes, A. 2000: *Los topónimos. Sus blasones y trofeos (La toponimia mítica)*, Madrid.
- García Merino, C. 1995: *Uxama I (Campanías de 1976 y 1978). Casa de la Cantera. Casa del Sextile. 'El Tambor'*, Madrid.
- García Sánchez, J. and Costa-García, J.M. 2021: 'Remote sensing and geophysical survey in Veladiez. A new sector of the Roman town of Segisamo (Sasamón, Burgos)', *Cadernos do Laboratorio Xeolóxico de Laxe* 43, 41–60.
- García Sánchez, J. and Sánchez Simón, M., 2021: 'Estudio del edificio romano junto al lavajo El Monduengo. Nuevos datos del complejo de la villa romana de Almenara de Adaja-Puras', *Munibe* 72, 171–84.
- Garland, N. 2020: *Hadrian's Wall – Frontier system. Figshare. Dataset*. <https://doi.org/10.25405/data.ncl.11855592> (accessed August 2025).
- González Rodríguez, M.C. 1997: *Los Astures y los cántabros vadinienses. Problemas y perspectivas de análisis de las sociedades indígenas de la Hispania indoeuropea*, Vitoria-Gasteiz.
- Henig, M. 2010: 'Souvenir or votive? The Ilam Pan', *ARA: The Bulletin of the Association for Roman Archaeology* 20, 13–15.
- Henig, M., Brown, D., Baatz, D., Sunter, N. and Allason-Jones, L. 1988: 'Objects from the Sacred Spring', in Cunliffe 1988, 5–35.
- Heurgon, J. 1949: 'Découverte à Amiens d'une patère de bronze émaillée avec une inscription relative au mur d'Hadrien', *Comptes-rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 93.2, 125–8.
- Heurgon, J. 1951: 'The Amiens patera', *Journal of Roman Studies* 41, 1–2, 22–4.
- Jackson, R. 2012: 'The Ilam Pan', in Breeze 2012c, 41–60.
- Jouttijärvi, A. 2017: 'Roman alloying practice', *Materials and Manufacturing Processes* 32.7–8, 813–26.
- Künzl, E. 2012: 'Enamelled vessels of Roman Britain', in Breeze 2012c, 23–36.
- Lerín, M., Tarancón, M.J., Barrio, R., Ruíz, A. and Arellano, O. 2005: *Intervención arqueológica en la Torre del Palacio de los Duques de Frías. Berlanga de Duero (Soria)*, unpub. report, Servicio Territorial de Cultura de Soria.
- Maheo, N. 2012: 'Amiens Patera', in Breeze 2012c, 37–9.
- Mattingly, D. and Schrüfer-Kolb, I. 2003: 'Les mines d'argent et de plomb en Grande-Bretagne romaine: les Mendips, Halkyn Mountain, Peak District/Pennines', in A. Orejas (ed.), *Atlas historique des zones minières d'Europe II*, Luxembourg, Dossier X.
- Meyer, A. 2013: *The Creation, Composition, Service and Settlement of Roman Auxiliary Units Raised on the Iberian Peninsula*, BAR International Series 2505, Oxford.
- Montero Ruiz, I. and Orejas, A. 2018: 'Minas, metales reciclados y monedas. Abastecimiento de cobre entre el Imperio romano y la Antigüedad tardía', *Mélanges de la Casa de Velázquez* 48.1, 111–35.
- Palol, P. de 1987: 'Una cantimplora de bronce con esmaltes del Museo de Prehistoria', *Archivo de Prehistoria Levantina* 17, 383–93.
- Petrovsky, R. 1993: *Studien zu Römischen Bronzegefäßen mit Meisterstempeln*, Kölner Studien zur Archäologie der Römischen Provinzen 1, Buch am Erlbach.
- Pollard, A.M., Bray, P., Gosden, C., Wilson, A. and Hamerow, H. 2015: 'Characterising copperbased metals in Britain in the first millennium AD: a preliminary quantification of metal flow and recycling', *Antiquity* 89, 697–713.

- Popkin, M. 2022: *Souvenirs and the Experience of Empire in Ancient Rome*, Cambridge.
- Reid, J.J., Schiffer, M.B. and Neff, J.M. 1975: 'Archaeological considerations of intrasite sampling', in J.W. Mueller (ed.), *Sampling in Archaeology*, Tucson, 209–24.
- Rodríguez, J., Sinner, A.G., Martínez-Chico, D. and Santos Zalduegui, J.F. 2023. 'AMALIA, A Matching Algorithm for Lead Isotope Analyses: formulation and proof of concept at the Roman foundry of Fuente Spitz (Jaén, Spain)', *Journal of Archaeological Science: Reports* 51, 104192.
- Sáenz Preciado, J.C. and Sáenz Preciado, M.P. 2023: Estudio y clasificación tipológica-decorativa de las *trullae* elaboradas en *terra sigillata* hispánica. *Archivo Español De Arqueología* 96, e10.
- Santos Yanguas, J. 1985: *Comunidades indígenas y administración romana en el Noroeste hispánico*, Vitoria.
- Spaul, J.E.H., 1994: *ALA<sup>2</sup>: The Auxiliary Cavalry Units of the Prediocletianic Imperial Roman Army*, Andover.
- Tarancón, M.J., Lerín, M., Barrio, R., Ruíz, A. and Arellano, O. 2017: *Intervención arqueológica protección patrimonio cultural. Modificación Puntual de las Normas Urbanísticas Municipales de Berlanga de Duero. Modificación Número 20: Ampliación de zona de almacenes y talleres en la calle Escabas*, unpub. report, Servicio Territorial de Cultura de Soria.
- Tomlin, R.S.O. 1988: 'Inscriptions on metal vessels', in Cunliffe 1988, 55–7.
- Willmott, H., Thompson, L., Lundy, J. and Crichton-Turley, C.-E. 2024: 'From Roman table to Anglo-Saxon grave: an archaeological biography of the Scremby Cup', *European Journal of Archaeology* 27.4, 507–25.

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