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A SELECTION OF ROMAN CERAMIC BUILDING MATERIAL DISCOVERED IN THE CENTRAL AREA OF POTAISSA

Gabriel ANDREICA
Ioana MĂRINCEAN
Turda History Museum

Cuvinte-cheie: Potaissa, ceramică romană, material de construcție, ștampile legionare, graffiti, urme de animal
Key words: Potaissa, Roman ceramics, building material, legionary stamps, *graffiti*, paw prints

The urban habitation of Potaissa is very little known compared to the military camp belonging to the Legio V Macedonica, the research being particularly difficult due to the fact that the ancient city was overlapped by later dwellings, the archaeological information being thus unsystematic, and the epigraphic ones few and unclear[1]. Under these circumstances, it is difficult to establish precisely what the original territory of the municipality of Potaissa was or how it developed over time, several hypotheses being formulated in this regard, especially since the presence of a competing city, as it is Napoca (*municipium* since the time of Hadrian and *colonia* under Marcus Aurelius, Septimius Severus offering the city *ius Italicum*[2]), makes such an approach difficult[3].

The archaeological research carried out in 17 Piața Romană, led to the discovery of several civilian buildings, following the model of homes that include both everyday space and various related dependencies. In the southern part of the buildings identified in the surveyed areas, we are dealing with a boundary that functioned as a road delimiting possible *insulae*. Since the research carried out by the local museum was completed only in the first two surfaces, it is obvious that the tiles are mainly spread in these two surfaces (SP I and SP II). However, they are not absent from the other surfaces. Moreover, in the research carried out by the Turda History Museum, the substructures of an *insula*-type structure with several construction phases were discovered. Only in the southern area, respectively in the surfaces SP I – SP IV and in the southern part of the SP V - SP VIII (**pl. II**) occupation levels could be identified as stone

[1] Ardevan 1998, p. 55.
[2] Ardevan 1998, p. 65.
[3] Nemeti *et alii* 2003, p. 69-75.

arrangements or *cocciopesto* where we were dealing with the interior floors of some rooms. In this area alone, one or two courses fo the structures elevation could be identified. In the rest of the surfaces (**pl. III-IV**), given the situation of the archaeological features belonging to the modern and contemporary period (the construction of some factories), elements of the elevations of the Roman walls could not be documented.

Within the current study we include a selection of the Roman *tegulae* sherds discovered during the extensive preventive archaeological research carried out by the collective of the Turda History Museum[4] in 17 Piața Romană (Turda) between August 26, 2021 and July 22, 2022 (**pl. I**). Of course, this material category was much more numerous, hundreds or maybe even thousands, so in the current study the selection was made based on a sorting of the Roman *tegulae* that bear stamps, *graffiti*, animal paw prints, human dermatoglyphs or any other type of less frequent material such as the paving tiles or *tegulae mammatae*. We decided to deal with the subject taking into account the typology of the selected sherds, which at the end also includes a catalog with details of the archaeological context, respectively with the physical characteristics. However, for a clearer contextualization in the field, we opted to place the sherds in the researched surfaces with direct references to the corresponding plates to each individual fragment.

″Dog-bone″ paving tiles are quite numerous among the discoveries in 17, Piața Romană, 29 pieces being discovered (**pl. V, VI/1-11**). Discoveries of this kind are widespread in almost all researched units opened to date. Their specific shape is similar to the figure "8", or more precisely they are characterized by rounded ends and concave sides[5]. The varied dimensions, as well as the characteristics of the ceramic paste (its diverse composition), clearly indicate a wide range of flooring styles in the rooms of the structures uncovered in the investigated area. Most have a consistent thickness between 2 and 3.5 cm and lengths of 5, 7.5, or 9 cm. The morphology of the ceramic paste suggests a local or regional production (and origin), similar to the other construction materials discovered.

In terms of the archaeological context, although these finds are scattered throughout the entire investigated area, it is not surprising that most of them (17

[4] We sent our thanks to all our colleagues from the research group and to those who made enormous efforts on the field: dr. Dan Matei, dr. Horațiu Groza, dr. Paul Chiorean and Steliana Potora. Also we express our gratitude to the colleagues who, through their opinions, contributed to the *graffiti* discussions: professor dr. Radu Ardevan (Babeș-Bolyai University, Cluj-Napoca) and scientific researcher dr. Florian Matei Popescu (Vasile Pârvan Institute of Archaeology, Bucharest).

[5] Similar pavement tiles were also reported at Porolissum, see: Lăzărescu, Sidó 2018, p. 47, fig. 15/5.

pieces) come from the SP I area, at a depth ranging from -1.2 to -1.65 m, as this zone is filled with the ruins of the identified *insula*. However, one of the tiles was found in the fill of a Roman well (referred to as G147).

Hexagonal or circular flooring tiles are, however, much less common than the previous category. One of the two hexagonal flooring elements has been preserved intact, having been discovered in the SP IX area (**pl. VI/12**), within a substantial layer of Roman debris (on the destruction layer) at a depth of -1.20 m. The second one (**pl. VI/13**), which is larger and preserved only fragmentarily, was found in relative proximity to the first, in SP X, at a depth of only 40 cm. It was most likely in a secondary position, having been disturbed during extensive work carried out for the modern construction identified in this area. The circular flooring elements are also just two, both preserved intact. The first was discovered at a shallow depth (40 cm) in the SP X area (**pl. VII/1**), while the second one (**pl. VII/2**) was found in the SP II area, at a depth of -1.2 m, in the corner of a room of the identified *insula*.

Roman roof tiles (*tegulae*) represent a distinct category of archaeological material due to both their exceptional abundance and their specific characteristics. Among Roman building materials, roof tiles are by far the most numerous, comprising, most probably, thousands of fragments, the majority of which originate from the extensive collapse deposits associated with the excavated structures.

An interesting aspect of most of these tiles is that in the preserved corner, the lower edge features an oblique cut, clearly indicating how they were joined together[6]. This cut served to facilitate a specific positioning of the tiles. Researchers unanimously agree that this type of cut is characteristic of military environments at the end of the 1st century and throughout the 2nd century AD[7]. Furthermore, P. Warry proposes that similar cuts should be dated narrowly between 100-180 AD[8]. However, it is likely that such dating could easily be extended in the case of Potaissa, considering that these could have been used for extended periods of time, as well as the fact that craftsmen could produce in the same style for a longer duration as long as the tiles retained their utility. Most likely, the tiles were produced locally, similar to those intended for the military troops stationed at Potaissa, which have also been found in the civilian area[9]. Evidence for this could be the rare stamped examples featuring variants of the inscription of the Legio V Macedonica. Such a practice was not specific to materials intended for civilian use.

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[6] McWhirr 1984, p. 60-61; Janek 2017, p. 85-86.
[7] Gazenbeek 2012, p. 95-97, fig. 5.4/H2; Mills 2013, p. 456-457, fig. 2/B6; Geerts 2014, p. 284-285, fig. 8.2/F, tab. 8.2.
[8] Warry 2006, p. 263, fig. 9/B.
[9] Bărbulescu 1994, p. 106, 122.

Among the fragments presented here, we also made a selection of those with *caliga* prints (**pl. VIII/1**), human dermatoglyphs (**pl. IX/1, IV**), and especially with dog paw prints (**pl. VIII/2**) due to the fact that such fragments are often overlooked or unmentioned, despite having the potential to generate extensive data and discussions. Such traces are frequently found on tiles, produced before firing, while the tiles dried on the ground for considerable periods of time. A comprehensive study of dogs in the Roman world conducted by Heidelinde Autengruber-Thüry indicates that these prints cannot be attributed to stray dogs. Moreover, although some may be incidental, it is possible that a significant proportion had an apotropaic role[10].

In the case of the roof tiles, we were able to identify only two examples with *graffiti*. The first features a partially visible retrograde *R* or *B* (or even a possible schematic drawing?), to the right of which is a stamp with the inscription *L(egionis) V M(acedonicae) f(idelis)* (**pl. VII/3**), which is relatively widespread in Potaissa, particularly within the legionary camp[11]. The second tile bearing *graffiti* may consitute a novelty, as the inscription could perhaps be interpreted as an abbreviation referring to a *tegularius*, potentially providing the first evidence of this occupational designation at Potaissa, in the form of *[...]Ṃ t(egulariu)s* (**pl. IX/3**). A very good analogy for mentioning the manufacturer of the tile can be found in the curtain wall tower no. 2 at Porolissum, where a certain *Marcellus tegularius* also appears on a roof tile[12].

The last four roof tiles under discussion bear epigraphic stamps of the legion stationed at Potaissa, all typologically different. One of these is applied retrograde, with a partially preserved inscription of *L(e)g(ionis) [V M(acedonicae)]*, framed within a *tabula ansata* with slightly curved ends that are attached to the edge of the cartouche (**pl. X/1**), with analogies found in the immediate vicinity of the tile in question[13]. Another retrograde specimen features the classic legend of the legion, *[L(egionis)] V M(acedonicae)* (**pl. X/2**), differing only in its typology[14]. The same legend appears on the next two stamps, with the first partially preserving the initial letter[15], as well as the initial of the legion and the numeral[16] (**pl. X/3, XI/1**).

[10] Autengruber-Thüry 2021, p. 384-392.
[11] IDR IV/1, p. 345-346, fig. 449. In other interpretations the last letter is read *P(iae)*, see Nemeti 2020, p. 94, type III, pl. I/P III.9.
[12] Gudea 1987, p. 101, 135, fig. 30; IDR Appendix I, p. 298-299, LXXXII/8.
[13] IDR IV/1, p. 305-306, fig. 356, applied on a *bessalis* from Liviu Cigăreanu street no. 16/18 (Turda).
[14] For analogies at Potaissa see: Nemeti 2022, p. 132, pl. IV/3, VII/3; IDR IV/1, p. 340, fig. 437.
[15] Similar stamp was lastly mentioned in IDR IV/1, p. 323, fig. 397.
[16] *LVM* stamp with the *V* letter in *U* shape belonged to Téglás collection, see IDR IV/1, p. 328, fig. 407.

The ridge-tiles *(imbrices*) were not found in impressive numbers; however, there is a notable stamped fragment whose inscription reads *L(egionis) V M(acedonicae) p(iae) f(idelis)*, located within a cartouche with edges formed by denticles (**pl. XI/2**). Similar stamps have also been identified on ridge-tiles discovered in the military camp, more precisely in the Principia[17].

The elements of the hypocaust system are also significant among the discoveries, of which only seven fragments were selected, most concentrated in the northern area of the SP I and SP II surfaces. Beyond the ceramic tiles typical of a normal hypocaust system (flooring), the discoveries also included *pedalia* and *bessalia*. Among the three presented fragments of *pedalia*, two bear traces of dog paw prints[18] (**pl. XI/3-4**), and only one example is epigraphically stamped with *L(egionis) V M(acedonicae)*, framed within a *tabula ansata* (**pl. XII/1**). Such stamps have local analogies in the Principia of the legionary camp[19]. As with the roof tiles and other categories of construction materials, we believe that these products were manufactured locally, in *officinae* that produced materials necessary for the military milieu. Their production required a lengthy period of time, especially for the entire process *ante cocturam*[20].

Of the two categories mentioned, the most numerous are the *bessalia* (square bricks that, when stacked, formed the supporting columns of the flooring). Naturally, considering that multiple *bessalia* were needed for a single *pila* (supporting column) and only two *pedalia* (one under the column and one on top of it), the smaller number of the latter category of construction material is to be expected. All three fragments of *bessalia* under discussion have distinctive characteristics. The first fragment bears a two-line *graffito* written in a highly cursive Latin script, whose paleographic characteristics make its reading and interpretation particularly difficult (**pl. XII/2**), The another bears the stamp of the same military unit, *[L(egionis) V] M(acedonicae)* (**pl. XII/3**), similar in type to others discovered in the Roman baths complex or in Principia[21]. The last *bessalis* is unique due to its cartouche, which, although fragmentary, probably represents a krater, an amphora placed in a holder or a fish (**pl. XIII/1**). The vessel's handle designs are almost completely erased, likely due to wear on the stamp that was applied before firing.

Regarding the **tegula mammata** type tiles, we have identified only a single fragment (**pl. XIII/2**), a "foot" that comes from the SP II area, at a shallow depth (35 cm). Generally, the role of such a piece is considered to be

[17] Bărbulescu 1994, p. 97, fig. 15/16; Grec 2006, p. 63-64, type 15; Nemeti 2020, p. 94, pl. I/P IV.18, pl. V/3; IDR IV/1, p. 351, fig. 461.
[18] For details regarding the discussion on dog pawprints see the footnote no. 10.
[19] Nemeti 2020, p. 94, pl. II/P VI.81; IDR IV/1, p. 309-310, fig. 365.
[20] Adam 2005, p. 106-116.
[21] Nemeti 2022, p. 132, no. 8, 144, pl. II/8; IDR IV/1, p. 314-315, fig. 376.

either to anchor the tegula in mortar or to aid the hypocaust by allowing warm air to circulate in the space between the tile and the wall[22].

A particularly notable fragment is a **lydion brick** with a circular stamp, which we believe is most likely the stamp of a civil producer from Potaissa or its surroundings (**pl. XIII/3**). This element is of special importance considering that it is the first civilian stamp discovered in Turda. In the circular field of the stamp, three letters are visible: *S S T* or *T S S*, most likely representing the initials of the producer. The brick was found in a secondary position given the context of the discovery, originating from the SP X area at a shallow depth (-0.35 m). The area of the discovery has been significantly affected by modern and contemporary constructions. Also, the manufacturer is not among the well-known names in Dacia[23].

A second lydion brick, preserved almost entirely, is a larger/classic variant, originating from the SP II area, inside a well-defined room. This brick bears a retrograde stamp with *L(e)g(ionis) V M(acedonicae)* (**pl. XIV**). An interesting aspect is that this type of stamp is often found in the civil environment of Potaissa, with a high number also present in Piața Romană[24], the area where the brick we studied was discovered. Typologically, it is identical to the *pedalis* described among the elements of the hypocaust system (**pl. X/1**).

The features belonging to the Roman period are identifiable due to later interventions at relatively deep levels, averaging between -1.75 and -2.10 meters, where they have not been destroyed by modern or contemporary developments. The Roman-era construction material represents a distinct category for two reasons: its enormous quantity and its characteristics. Among the categories of Roman building materials, roof tiles are the most numerous, amounting to thousands of fragments mainly derived from the vast level of rubble from the discovered structures. Although, for various reasons, such archaeological material is less often highlighted scientifically, we believe that greater attention to this vast category can make a significant contribution to the study of provincial society in Dacia and beyond, particularly regarding data on trade, usage, distribution, and possible *officinae*, which still remain too little known.

ABSTRACT

The paper discusses new Roman ceramic building material discovered during excavations in the central area of Potaissa (Turda, Romania). We discuss 57 fragments,

[22] McComish 2015, p. 21, pl. 18.
[23] Pop 1994, p. 42-46.
[24] IDR IV/1, p. 305-306, fig. 356.

comprising in their vast majority ”dog-bone” paving tiles and roof tiles, but also other elements common to construction materials categories. Although the introductory part integrates the general discussions regarding the functionality or other special characteristics in the archaeological contextualization, the most consistent part of this study is the catalogue, which includes the technical details and the conditions of the discovery. The novelty, in this case, is represented by the three graffiti, among which a possible *tegularius* is mentioned for the first time at Potaissa. Also in the category of originality belongs the first stamp of a local potter identified so far in this area

Catalogue

L – length
W – width
Th. – thickness
H – height
diam. – diameter
inv. no. – inventory number
CR – Roman building
CM – modern building

″Dog-bone″ paving tiles

pl. V/1 – inv. no. 25858V: SP X/2021, grid A, depth -0.50 m, south to the modern factory wall; dimensions: L 7.3 cm / W 3.8 cm / Th. 3.7 cm.
pl. V/2 – inv. no. 25859V: SP X/2021, grid A, depth -0.50 m, south to the modern factory wall; dimensions: L 7.4 cm / W 4.2 cm / Th. 3.2 cm.
pl. V/3 – inv. no. 25860V: SP X/2021, grid A, depth -0.50 m, south to the modern factory wall; dimensions: L 9.2 cm / W 5.8 cm / Th. 3.5 cm.
pl. V/4 – inv. no. 25861V: SP X/2021, grid C, depth -0.35 m; dimensions: L 5.5 cm / W 3.3 cm / Th. 2.1 cm.
pl. V/5 – inv. no. 25862V: SP I/2021-2022, grid A, depth -1.30 m, in the north-eastern corner of the grid; dimensions: L 5 cm / W 3.7 cm / Th. 2 cm.
pl. V/6 – inv. no. 25863V: SP I/2021-2022, grid D, depth -1.45 m; dimensions: L 5.2 cm / W 3.3 cm / Th. 2 cm.
pl. V/7 – inv. no. 25864V: SP I/2021-2022, grid D, depth -1.20 m; dimensions: L 5.7 cm / W 3.5 cm / Th. 1.8 cm.
pl. V/8 – inv. no. 25865V: SP I/2021-2022, grid D, depth -1.25 m; dimensions: L 5.2 cm / W 3.5 cm / Th. 2.1 cm.
pl. V/9 – inv. no. 25866V: SP I/2021-2022, grid D, depth -1.25 m; dimensions: L 6 cm / W 3.7 cm / Th. 2.5 cm.
pl. V/10 – inv. no. 25867V: SP I/2021-2022, grid D, depth -1.50 m, between wall Z6 and south-eastern profile; dimensions: L 5.6 cm / W 3.2 cm / Th. 2 cm.
pl. V/11 – inv. no. 25868V: SP I/2021-2022, grid C, depth -1.40 m, north to wall Z2; dimensions: L 4.9 cm / W 3.2 cm / Th. 2 cm.
pl. V/12 – inv. no. 25869V: SP I/2021-2022, grid C, depth -1.40 m, north to wall Z2; dimensions: L 5.1 cm / W 3 cm / Th. 2 cm.

pl. V/13 – inv. no. 25870V: SP I/2021-2022, grid C, depth -1.50 m, west to wall Z4; dimensions: L 5.3 cm / W 3.5 cm / Th. 2 cm.
pl. V/14 – inv. no. 25871V: SP I/2021-2022, grid B/C, depth -1.65 m, on the layer of floor tiles; dimensions: L 7.5 cm / W 4 cm / Th. 3.4 cm.
pl. V/15 – inv. no. 25872V: SP I/2021-2022, grid B, depth -1.40 m, in the northern corner of the grid; dimensions: L 5.3 cm / W 3.3 cm / Th. 2 cm.
pl. V/16 – inv. no. 25873V: SP I/2021-2022, grid B, depth -1.50 m, CR2 area; dimensions: L 5.4 cm / W 3.3 cm / Th. 2 cm.
pl. V/17 – inv. no. 25874V: SP I/2021-2022, grid C, pit G147; dimensions: L 4.9 cm / W 3.4 cm / Th. 3 cm.
pl. V/18 – inv. no. 25875V: SP I/2021-2022, grid A, pit G127; dimensions: L 5 cm / W 3.3 cm / Th. 2 cm.
pl. VI/1 – inv. no. 25876V: SP I/2021-2022, grid B, depth -2 m, pit G127; dimensions: L 5.1 cm / W 3.4 cm / Th. 1.8 cm.
pl. VI/2 – inv. no. 25877V: SP I/2021-2022, grid B, depth -2 m, pit G127; dimensions: L 5.1 cm / W 3.6 cm / Th. 2 cm.
pl. VI/3 – inv. no. 25878V): SP I/2021-2022, grid D, depth -1.30 m, north to modern building CM1; dimensions: L 8 cm / W 4.5 cm / Th. 3.5 cm.
pl. VI/4 – inv. no. 25879V: SP III/2021-2022, grid B/C, depth -0.80 m; dimensions: L 8.2 cm / W 4.5 cm / Th. 3.8 cm.
pl. VI/5 – inv. no. 25880V: SP V/2022, grid D, depth -0.85 m; dimensions: L 7.5 cm / W 4.3 cm / Th. 3.7 cm.
pl. VI/6 – inv. no. 25881V: SP V/2022, grid A, depth -0.70 m; dimensions: L 5.2 cm / W 3.4 cm / Th. 1.9 cm.
pl. VI/7 – inv. no. 25882V: SP V/2022, grid A, depth -0.70 m; dimensions: L 5.9 cm / W 4 cm / Th. 1.7 cm.
pl. VI/8 – inv. no. 25883V: SP V/2022, grid A, depth -0.55 m, in the north-western corner of the grid; dimensions: L 7.2 cm / W 4.3 cm / Th. 3.4 cm.
pl. VI/9 – inv. no. 25884V: SP VI/2022, grid A, depth -0.50 m; dimensions: L 7.8 cm / W 4.7 cm / Th. 3 cm.
pl. VI/10 – inv. no. 25885V: SP VI/2022, grid A, depth -0.50 m; dimensions: L 5.2 cm / W 3.5 cm / Th. 2.1 cm.
pl. VI/11 – inv. no. 25886V: SP VIII/2022, grid D, depth -0.65 m; dimensions: L 5 cm / W 3.7 cm / Th. 2 cm.

Hexagonal and circular floor tiles
pl. VI/12 – Hexagonal floor tile (inv. no. 25887V): SP IX/2021-2022, grid A, depth -1.20 m, on the destruction layer; dimensions: L 5 cm / Th. 3 cm.
pl. VI/13 – Hexagonal floor tile (inv. no. 25888V): SP X/2021-2022, grid A, depth -0.40 m; dimensions: L 17 cm / Th. 3.6 cm.
pl. VII/1 – Circular floor tile (inv. no. 25889V): SP X/2021-2022, grid A, depth -0.40 m; dimensions: D 8.4-9 cm / Th. 2.4 cm.
pl. VII/2 – Circular floor tile (inv. no. 25890V): SP II/2021-2022, grid D, depth -1.20 m, in the corner of room E, near the wall Z8 and south-western profile; dimensions: D 5.8-6.6 cm / Th. 3.2 cm.

Roof tiles

pl. VII/3 – inv. no. 25892V: with *graffito R* or *B* (or a possible schematic drawing) and *LVMP(F)* stamp, SP I/2021-2022, grid C, depth -1.30 m; dimensions: L 47.5 cm / W 24 cm / Th. 3 cm.
pl. VIII/1 – inv. no. 25893V: with *caliga* imprint, SP I/2021-2022, grid C, depth -1.30 m; dimensions: L 23.5 cm / W 23.5 cm / Th. 3 cm.
pl. VIII/2 – inv. no. 25894V: with dog paw prints, SP I/2021-2022, grid C, depth -1.40 m; dimensions: L 30.5 cm / W 26.5 cm / Th. 3 cm.
pl. VIII/3 – inv. no. 25895V: with dog paw print, SP II/2021-2022, grid C, depth -1.20 m, from the destruction layer; dimensions: L 24.5 cm / W 16 cm / Th. 3 cm.
pl. VIII/4 – inv. no. 25896V: with *graffito*, SP II/2021-2022, grid C, depth -1.25 m; dimensions: L 28 cm / W 26.5 cm / Th. 2 cm.
pl. VIII/5 – inv. no. 25897V: with dog paw print, SP II/2021-2022, grid C, depth -1.25 m; dimensions: L 18.5 cm / W 16.5 cm / Th. 2.6 cm.
pl. VIII/6 – inv. no. 25898V: with dog paw print, SP II/2021-2022, grid C, depth -1.25 m; dimensions: L 33.7 cm / W 15 cm / Th. 2.8 cm.
pl. IX/1 – inv. no. 25900V: with dermatoglyphs, SP II/2021-2022, grid B/C, depth -1.65 m, to north of wall Z23; dimensions: L 13.5 cm / W 11.5 cm / Th. 4.2 cm.
pl. IX/2 – inv. no. 25901V: with dog paw print, SP II/2021-2022, grid B, depth -1.70 m, CR1 area; dimensions: L 15.5 cm / W 11.5 cm / Th. 4.2 cm.
pl. IX/3 – inv. no. 25902V: with *graffito*, SP II/2021-2022, grid B, depth -1.55 m, on the tile paving; dimensions: L 17 cm / Th. 2.5 cm.
pl. X/1– inv. no. 25903V: stamped with *LV[M]* (backward), SP II/2021-2022, grid A, depth -1.75 m, room bounded by walls Z25, Z7 and north-western profile; dimensions: L 8.3 cm / W 7.2 cm / Th. 1.7 cm.
pl. X/2 – inv. no. 25904V: stamped with *[L]VM* (backward), SP III/2021-2022, grid B, depth -0.80 m; dimensions: L 12 cm / W 11.2 cm / Th. 3 cm.
pl. X/3 – inv. no. 25905V: stamped with *L[VM]*, SP VI/2021-2022, grid A, depth -0.75 m, within the conglomeration of Roman tiles and rubble stone; dimensions: L 14.4 cm / W 8 cm / Th. 3 cm.
pl. XI/1 – inv. no. 25906V: stamped with *LV[M]*, SPIII – IV/2021-2022, *passim*; dimensions: L 12.8 cm / W 13.5 cm / Th. 2.4 cm.

Ridge-tile (*imbrex*)
pl. XI/2 – inv. no. 25907V: stamped with *LVMPF*, SPI/2021-2022, grid C, in the well G158, depth -1.5 m; dimensions: L 11.3 cm / W 8.5 cm / Th. 2.4 cm.
Pedalia
pl. XI/3 – inv. no. 25908V: with dog paw prints, SPI/2021-2022, grid C, depth -1.30 m, CR1 area; dimensions: L 19.3 cm / W 17.8 cm / Th. 4.8 cm.
pl. XI/4 – inv. no. 25909V: with dog paw print, SPI/2021-2022, grid C, depth -1.40 m, CR1 area, towards the north-eastern profile; dimensions: L 15 cm / W 15.8 cm / Th. 4.5 cm.

pl. XII/1 – inv. no. 25891V: stamped with *LVM*, SP I/2021-2022, grid A, depth -1.50 m, west to wall Z8, on the clay floor; dimensions: L 27 cm / W 16.5 cm / Th. 5.5 cm.

Bessalia
pl. XII/2 – inv. no. 25910V: with *graffito*, SPI/2021-2022, grid B, depth -1.70 m, inside the wall Z11; dimensions: L 12.3 cm / W 8.2 cm / Th. 4.5 cm.
pl. XII/3 – inv. no. 25911V: stamped with *[LV]M*, SPI/2021-2022, *passim*; dimensions: L 12 cm / W 11.5 cm / Th. 5.5 cm.
pl. XIII/1 – inv. no. 25899V: a rectangular cartouche depicting a volute krater, SP II/2021-2022, grid C, depth -1.40 m, to north of wall Z47; dimensions: L 7.3 cm / W 6.7 cm / Th. 4.5 cm.

Tegula mammata
pl. XIII/2 – inv. no. 25912V: SPII/2021-2022, grid C, depth -0.35 m; dimensions: L 14 cm / W 11.7 cm / Th. 2.5 cm / H 10.3 cm.

Lydion brick
pl. XIII/3 – inv. no. 25913V: circular potter stamp *S[T?]/S*, SPX/2021-2022, grid C, depth -0.35 m; dimensions: L 16.8 cm / W 14 cm / Th. 3.7 cm.
pl. XIV – inv. no. 25931V: stamped with *L G V M* and dermatoglyph, SPII/2021-2022, grid B, in the room edged by Z1, Z2 and Z3; dimensions: L 40 cm / W 26 cm / Th. 5.5 cm.

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Bibliography:

Adam 2005 – J. P. Adam, *Roman building materials and techniques*, London and New York, 2005.

Ardevan 1998 – R. Ardevan, *Viața municipală în Dacia Romană*, Timișoara, 1998.

Autengruber-Thüry 2021 – H. Autengruber-Thüry, *Hunde in der römischen Antike: Rassen/Typen – Zucht – Haltung und Verwendung*, Oxford, 2021.

Bărbulescu 1994 – M. Bărbulescu, *Potaissa. Studiu monografic*, Turda, 1994.

Gazenbeek 2012 – G. Gazenbeek, „Grofkeramisch (bouw)materiaal en natuursteen", *Basisrapportage Archaeologie*, 43, 2012, p. 91-132.

Geerts 2014 – R. C. A. Geerts, „Het keramisch bouwmateriaal", in: H. A. P. Veldman, R. C. A. Geerts, P. L. M. Hazen, H. M. Van der Velde (red.), *Aan de rand van de Romeinse stad. Atuatuca Tungrorum*, Amersfoort/Leuven, 2014, p. 283-298.

Grec 2006 – M. Grec, *Tegulae Legionis V Macedonicae*, Arad, 2006.

Gudea 1987 – N. Gudea, „Contribuții la paleografia latină romană din Dacia. I. Inscripții pe cărămizi și țigle", *Acta Musei Porolissensis*, XI, 1987, p. 91-158.

IDR Appendix I – I. Piso, D. Deac, *Inscriptiones Daciae Romanae. Appendix I. Inscriptiones laterum Musei Zilahensis*, Cluj-Napoca, 2016.

IDR IV/1 – I. Piso, *Inscriptiones Daciae Romanae IV/1 (Inscriptions de la Dacie Romaine IV/1). Dacia Porolissensis. Potaissa et vicinia*, Paris, 2024.

Janek 2017 – T. Janek, „On the Production and Distribution of the Ceramic Building Material in Vindobona", *Studia Hercynia*, XXI, 2, 2017, p. 81-96.

Lăzărescu, Sidó 2018 – V. A. Lăzărescu, K. Sidó, „The ceramic production centre from Porolissum", in: V. Rusu-Bolindeț, C. A. Roman, M. Gui, I. A. Iliescu, F. O. Botiș, S. Mustață, D. Petruț (ed.), *Atlas of Roman pottery workshops from the provinces Dacia and Lower Moesia/Scythia Minor (1st-7th centuries AD) (I)*, Cluj-Napoca, 2018, p. 31-53.

McComish 2015 – J. M. McComish, *A guide to ceramic building materials. An insight report*, York, 2015.

McWhirr 1984 – A. McWhirr, *The production and distribution of brick and tile in Roman Britain*, University of Leicester 1984 (PhD thesis).

Mills 2013 – P. Mills, „The supply and distribution of ceramic building material in Roman Britain", in: L. Lavan (ed.), *Local Economies? Production and Exchange in Inland Regions in Late Antiquity*, Leiden, 2013, p. 451-469.

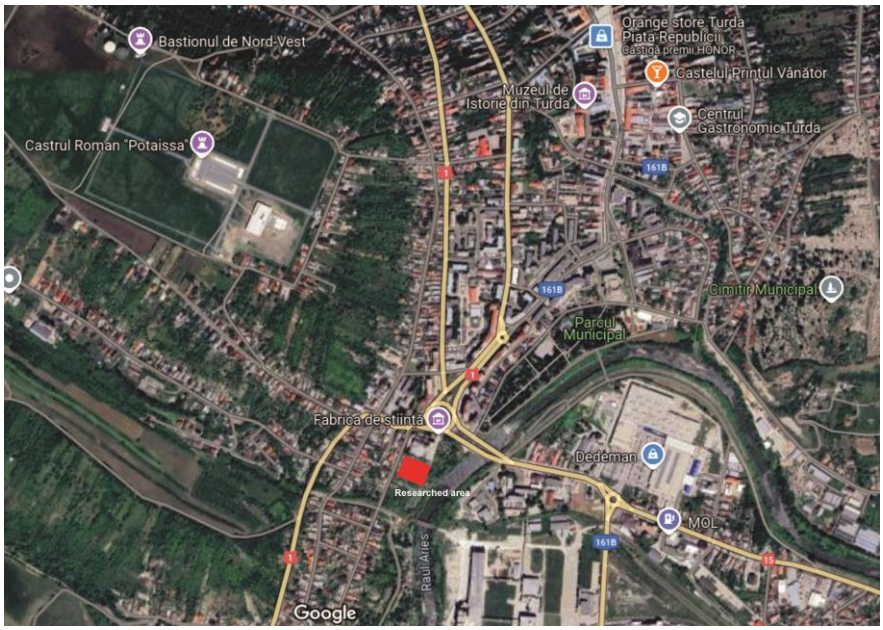
Nemeti 2020 – S. Nemeti, „Materialul tegular ștampilat", in: M. Bărbulescu (coord.), *Principia din castrul legionar de la Potaissa*, Cluj-Napoca 2020, p. 93-96.

Nemeti 2022 – S. Nemeti, „Stamps of the Legio V Macedonica from Potaissa. The old collections of the Turda History Museum", *Acta Musei Napocensis*, 29, 2022, p. 129-153.

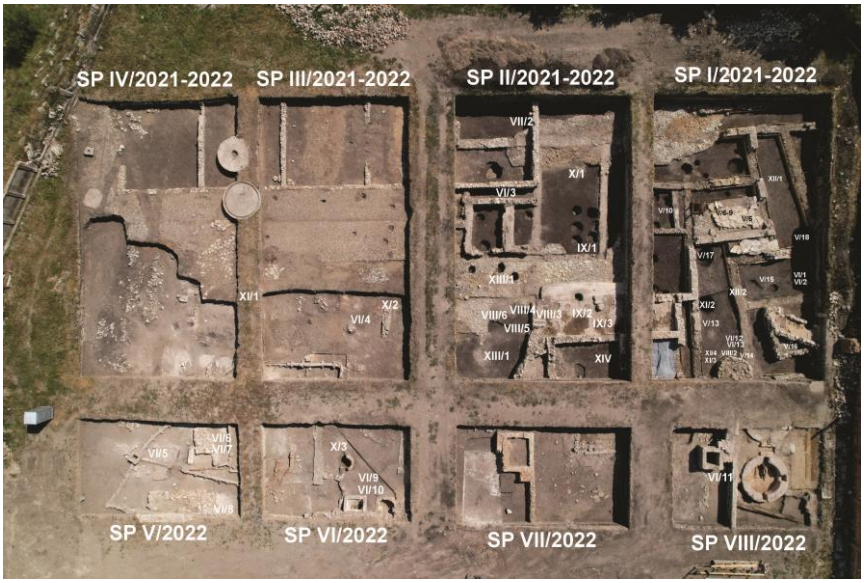
Nemeti *et alii* 2003 – S. Nemeti, I. Nemeti, F. Fodorean, „Territorium Potaissae", *Revista Bistriței*, 17, 2003, p. 69-75.

Pop 1994 – C. Pop, „Ateliere particulare de ceramică în Dacia Romană", *Revista Bistriței*, 8, 1994, p. 41-47.

Warry 2006 – P. Warry, „A dated typology for Roman roof-tiles (tegulae)", *Journal of Roman Archaeology*, 19, 1, 2006, p. 247-265.



Pl. I. Aerial plan of the archaeological researched area (source: Google Maps).



Pl. II. Surfaces SP I - SP VIII and material distribution (photo credit: Marius Romilă).



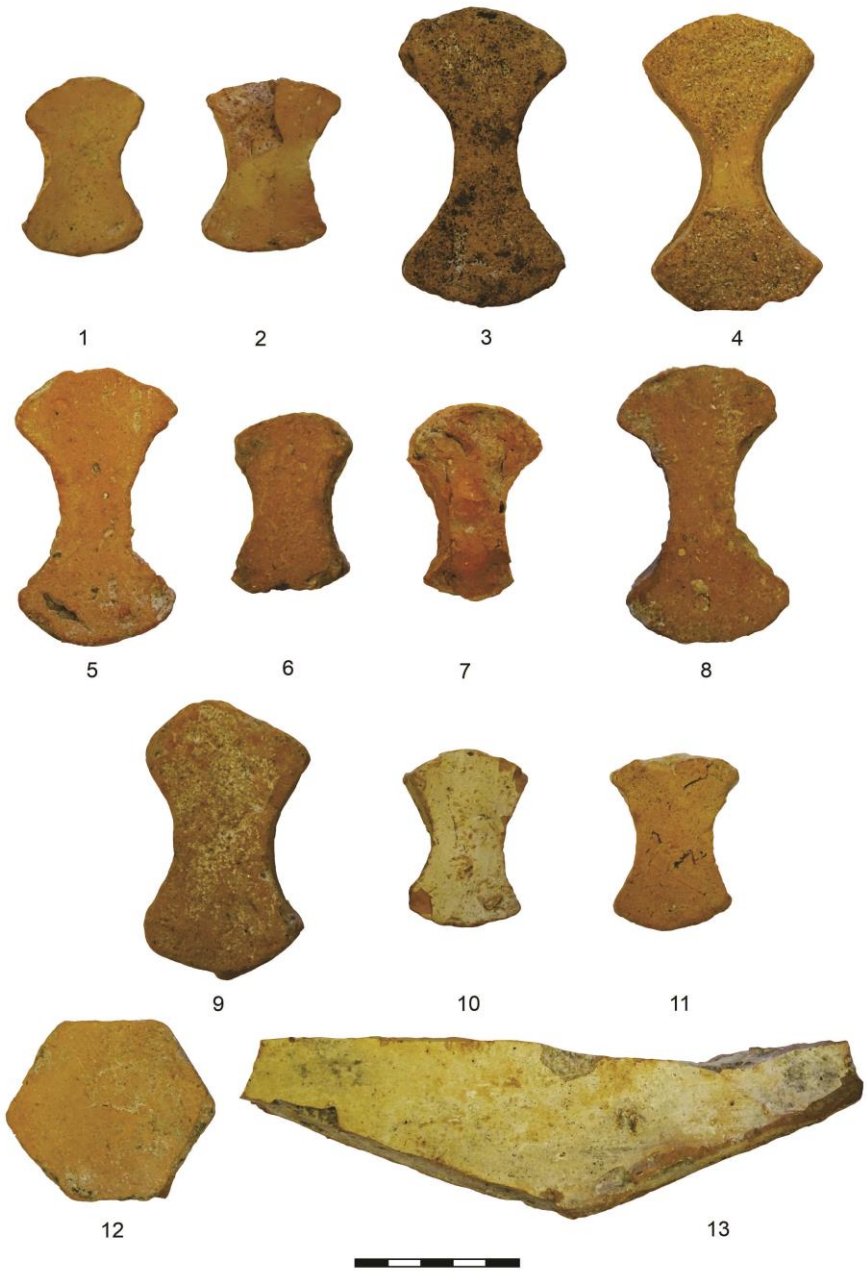
Pl. III. Surface SP IX and material distribution (photo credit: Marius Romilă).



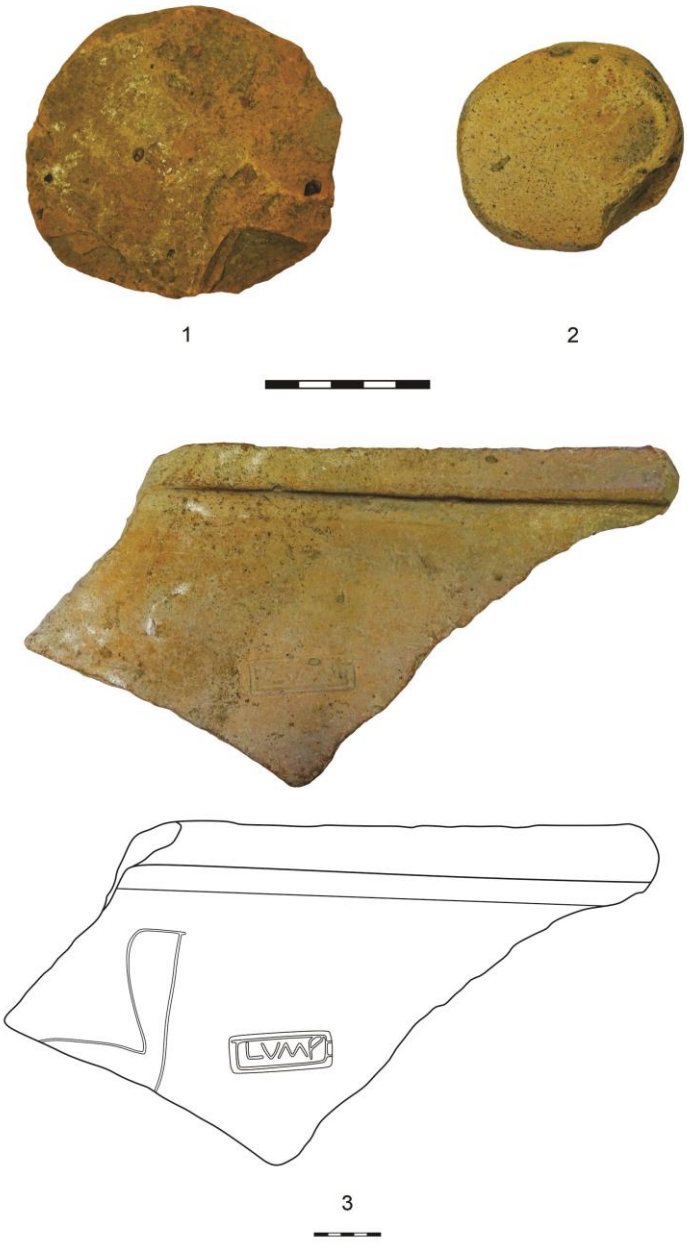
Pl. IV. Surface SP X and material distribution (photo credit: Marius Romilă).



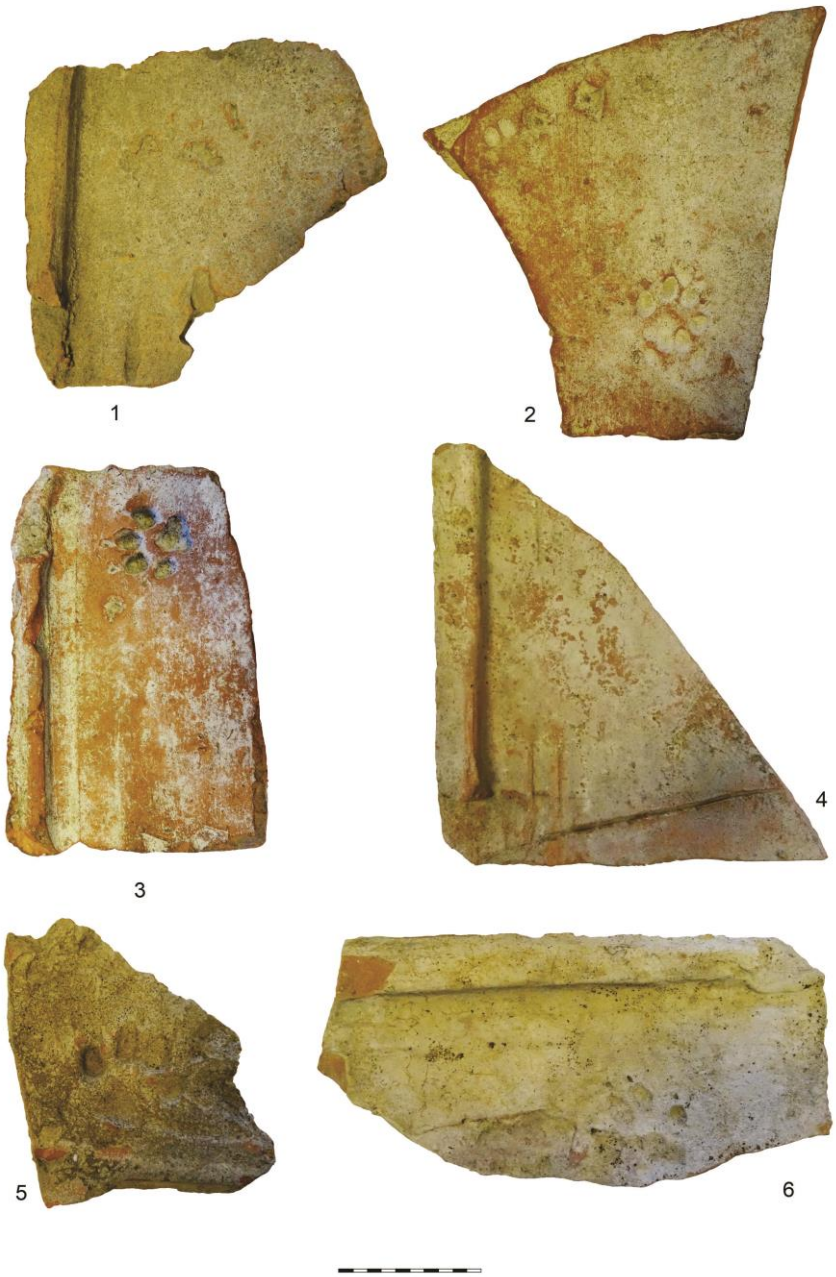
Pl. V. ”Dog-bone” paving tiles.



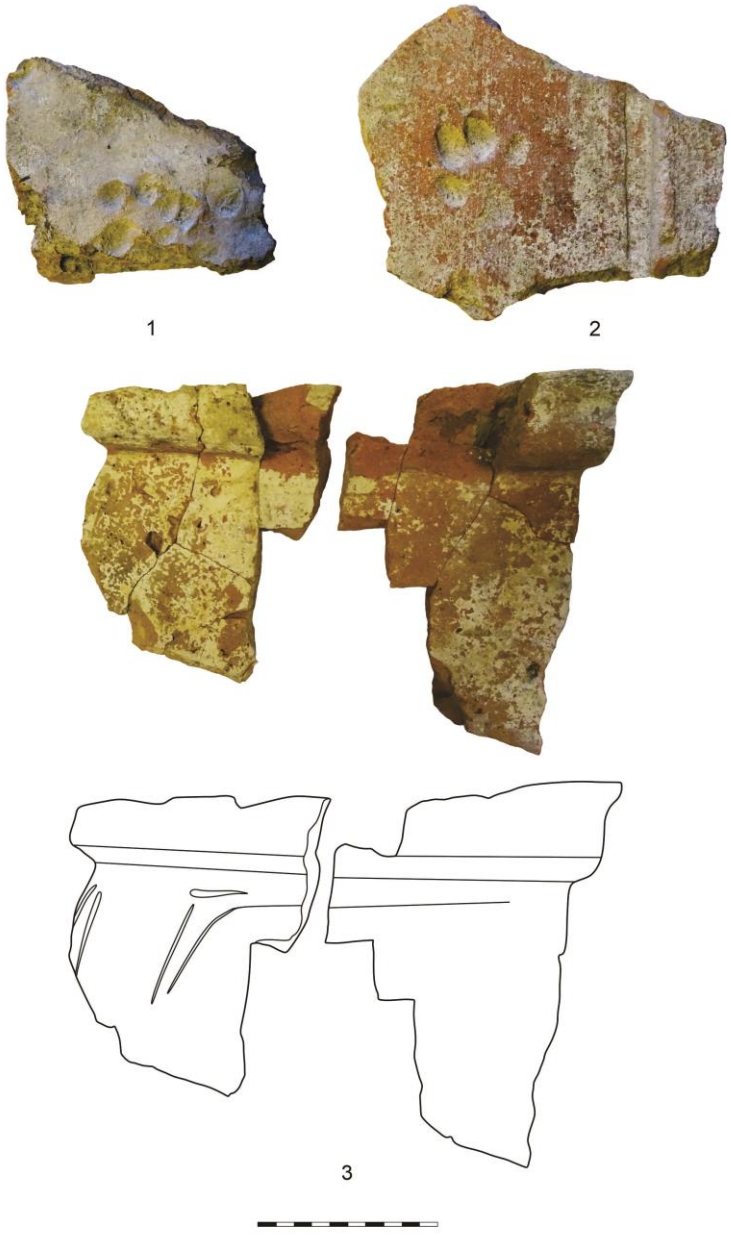
Pl. VI. 1-11. ”Dog-bone” paving tiles; 12-13. hexagonal floor tiles.



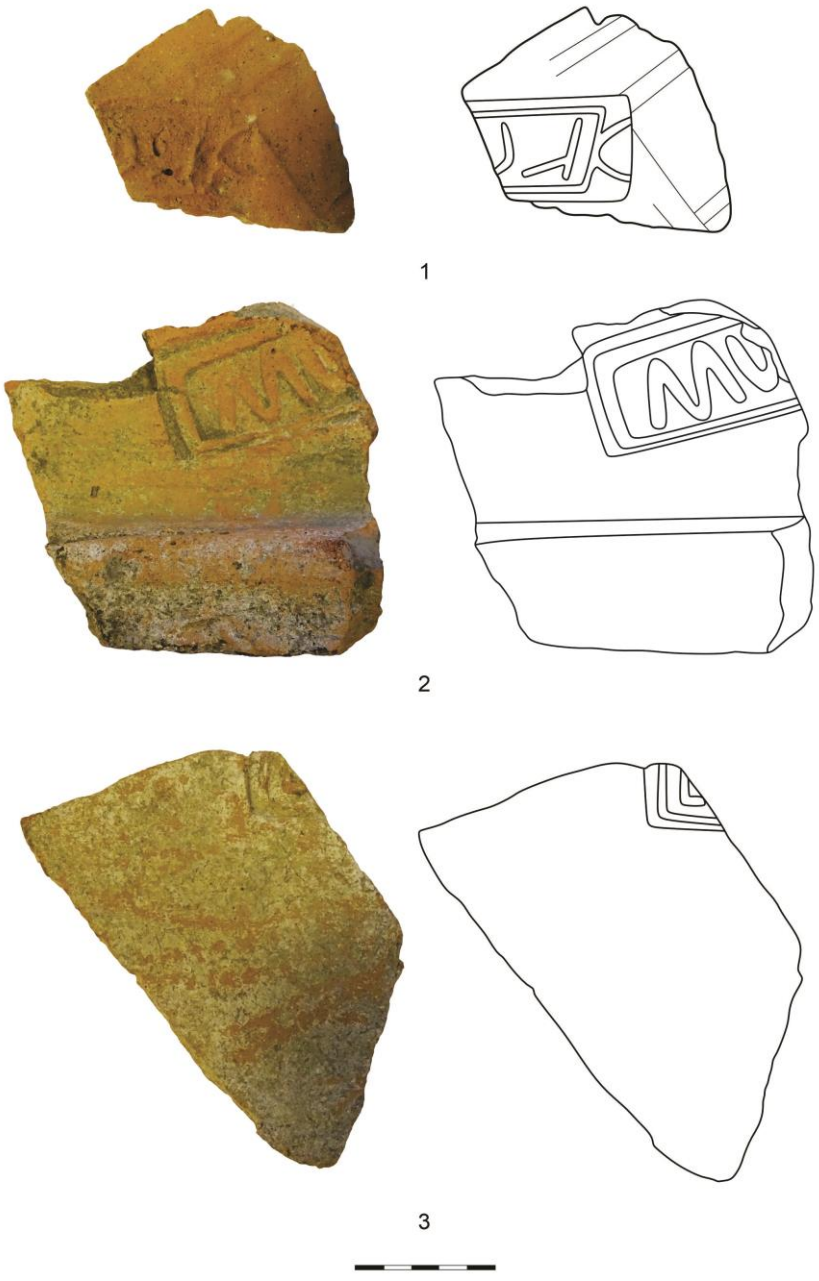
Pl. VII. 1-2. Circular floor tiles; 3. roof tile.



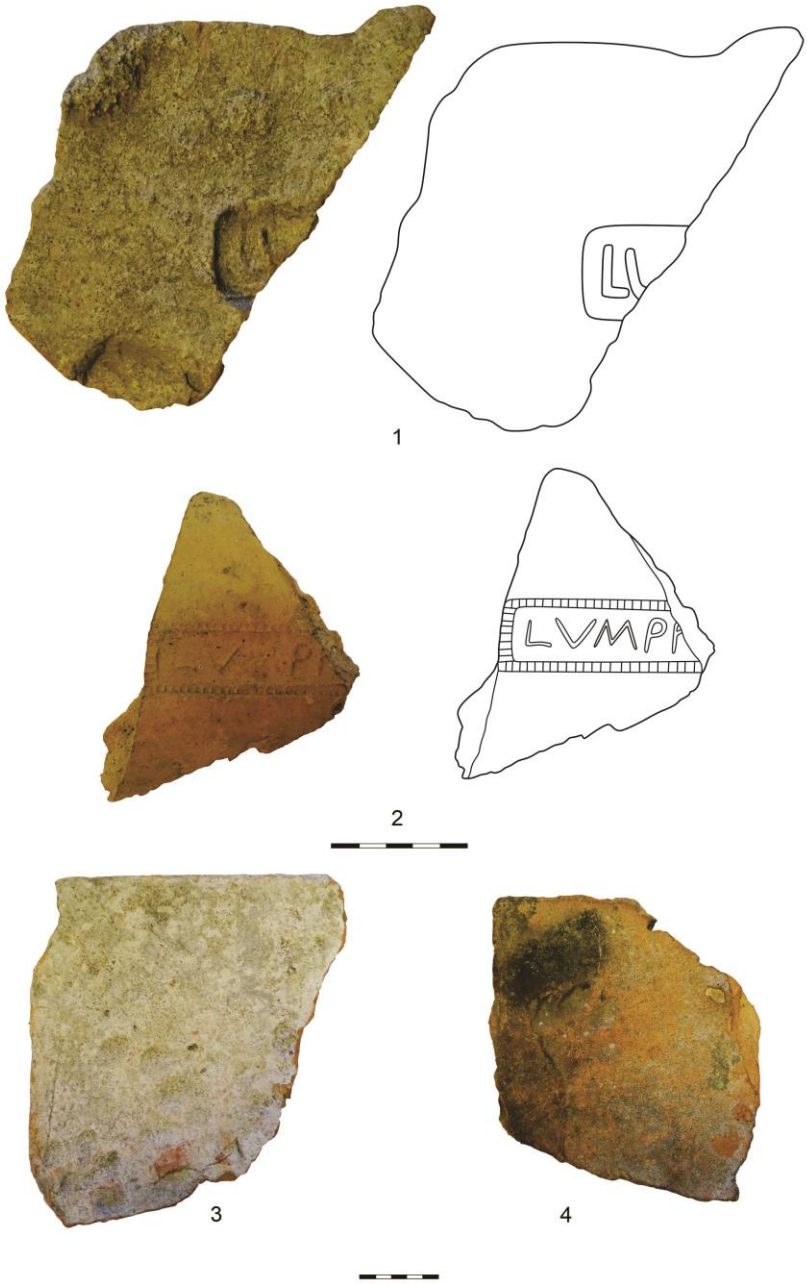
Pl. VIII. Roof tiles: 1. *caliga* imprint; 2-3, 5-6. dog paw imprint; 4. *Graffiti*.



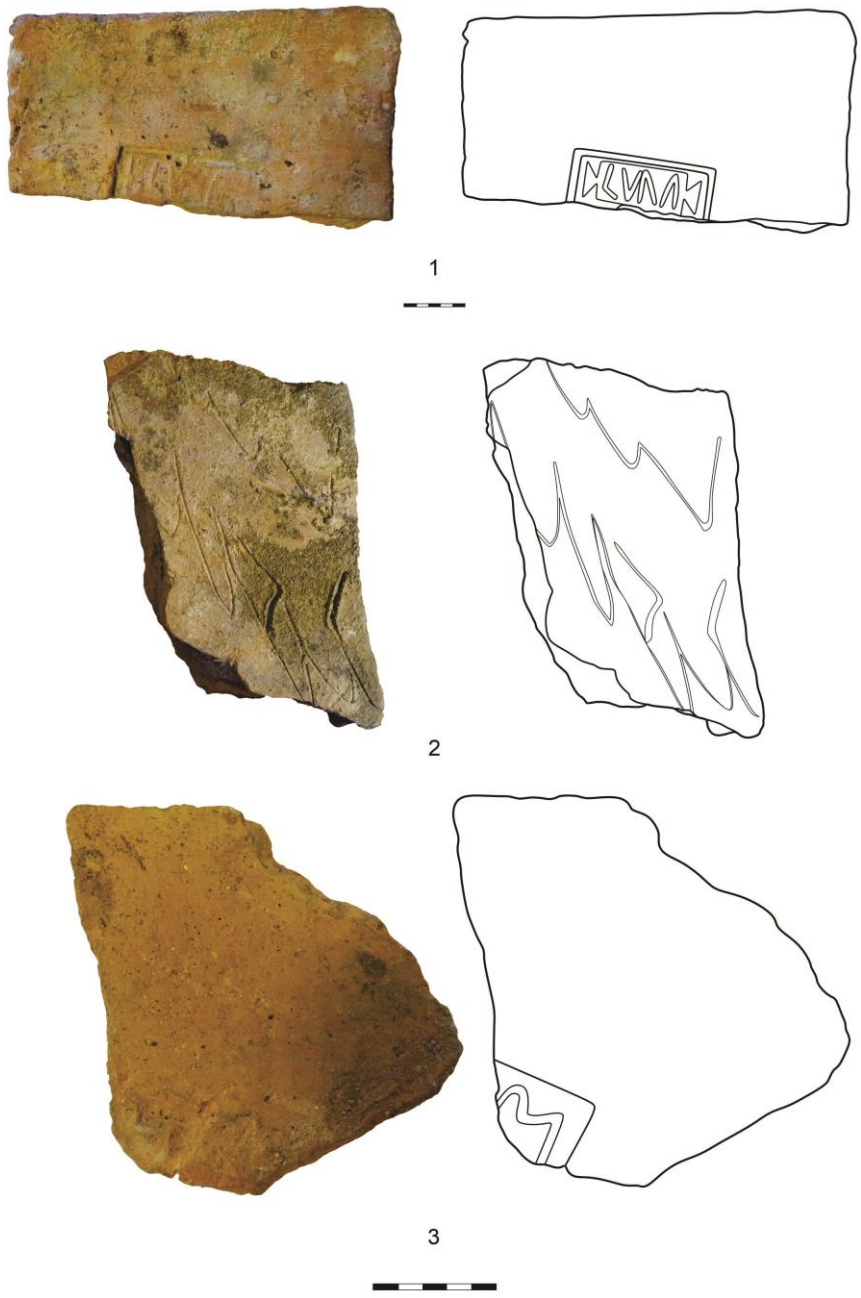
Pl. IX. Roof tiles: 1. with dermatogryphs; 2. dog paw imprint; 3. *Graffiti – [...]Ṃ t(egulariu)s.*



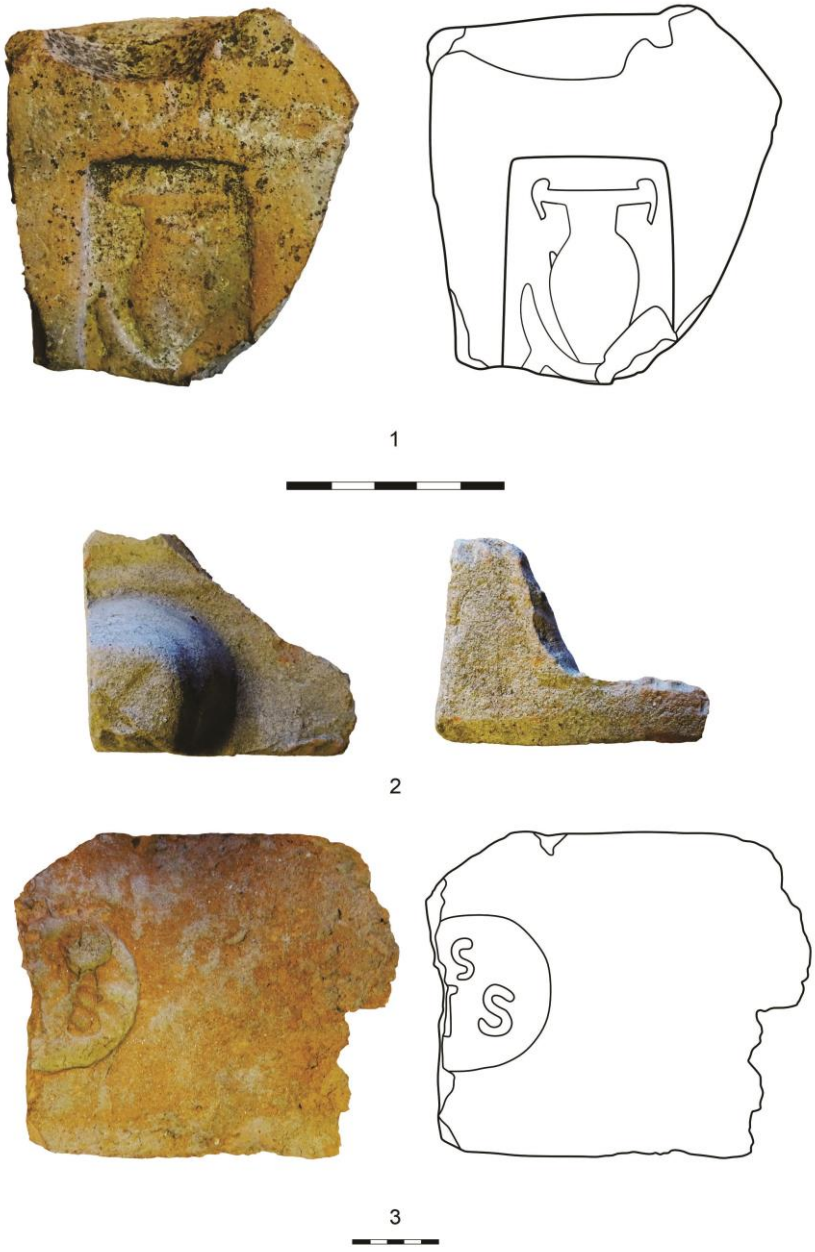
Pl. X. Stamped roof tiles: 1. *LV[M]* (backward); 2. *[L]VM* (backward); 3. *L[VM]*.



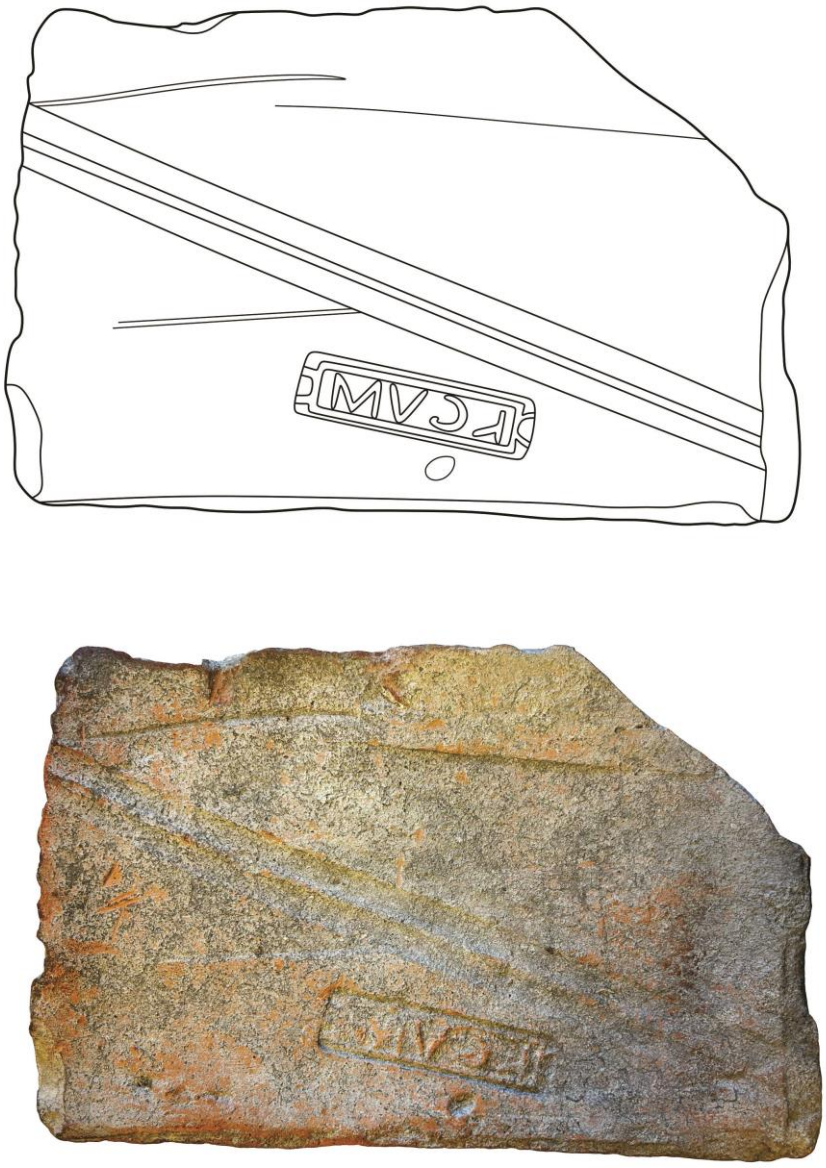
Pl. XI. Stamped roof tiles: 1. *LV[M]*; 2. *LVMPF*; 3-4. *pedalia* with dog paw prints.



Pl. XII. 1. Stamped pedalis - *LVM*; 2. *bessalis* with *graffiti*; 3. stamped *bessalis* - *[LV]M*.



Pl. XIII. 1. Stamped *bessalis*; 2. *tegula mammata*; 3. lydion brick with potter stamp - *S[T?]/S.*



Pl. XIV. Stamped lydion brick – *LGVM* (backward).