Graffiti, Tituli Picti and Manufacturer Stamps Identified on Roman Earthenware from the Potaissa Legionary Fortress (2nd-3rd centuries AD)

Luciana NEDELEA

Babeş-Bolyai University Cluj-Napoca E-mail: nedelealuciana753@yahoo.com

Abstract: From the ceramic lot (circa 10.000 Roman wares) identified within the legionary fortress at Potaissa, only 10 of them bear *graffiti*, *tituli picti* and manufacturer stamps on their body (0,1% of the total). The ceramic wares were recovered from various areas of the fortress, namely the barracks (*praetentura sinistra, praetentura dextra, latus praetorii dextrum, retentura*), the legionary baths (*thermae*), the western gate (*porta decumana*), and the headquarters building (*Principia*). In the present study I will offer an interpretation of the finds, as well as an explanation for the extremely rare occurance of manufacturer stamps within the Potaissa legionary fortress.

Keywords: *Graffiti*; Roman pottery; Potaissa; *legio V Macedonica*; legionary fortress.

Rezumat: Din întregul lot ceramic (circa 10.000 de vase de factură romană) identificat in castrul legionar de la Potaissa, doar 10 vase prezintă graffiti, tituli picti și ștampile de producător pe corpul lor (0,1% din total). Piesele ceramice au fost descoperite în diverse zone ale castrului, respectiv cazărmile soldaților (praetentura sinistra, praetentura dextra, latus praetorii dextrum, retentura), termele castrului (thermae), poarta de vest (porta decumana) si clădirea comandamentului (Principia). În studiul de față voi oferi o interpretare a materialului descoperit, cât și o explicație privind problema frecvenței extrem de reduse a stampilelor de producător în castrul legionar de la Potaissa.

Cuvinte cheie: *Graffiti;* ceramică romană; Potaissa; *legio V Macedonica;* castru legionar.

General Overview

Archaeological investigations within the legionary Potaissa legionary fortress have been extensive throughout time, leading to the discovery of circa 10.000 individual Roman wares¹. However, my analysis has indicated that only ten (representing 0,1% of the total) of these finds bear *graffiti*, *tituli picti* and manufacturer stamps (**Pl. I**). These highly interesting wares have been recovered from various areas of the fortress, namely the soldier's barracks (*praetentura sinistra*, *praetentura dextra*, *latus praetorii dextrum*, *retentura*), the legionary baths (*thermae*), the western gate (*porta decumana*), and the headquarters building (*Principia* – its chambers, as well as the *forum militare*).

Of the ten vessels, only three had been previously published (prior to the ceramic analysis for my doctorate thesis), namely those bearing the only three manufacturer stamps discovered within this fortress (**Pl. V, VII/2-3**). To these, my analysis will add six further *graffiti* and one *titulus pictus*. At the same time, in the light of recent research, I will offer a revision of the three manufacturer stamps, as well as an answer to why these stamps do not occur more frequently within the legionary fortress. The wares will be presented in the second part of the study, divided by their points of discovery. With the exception of the already published wares, each individual find will be presented as following: a) physical characteristics of the ware; b) historical interpretation of the find.

At Potaissa, the most "numerous" are the *post cocturam graffiti* (cut after firing). They are usually *milites* names of the *legio V Macedonica*, rendered with capital letters (**Pl. II, IV, VI**). Generally, in the military milieu, this type of *graffiti* are very frequent, as most soldiers would try to write their names in the form of simple autographs that marked their property. Due to the fact that most of them were engaged in physical activities and did not require (or put to use) the knowledge of writting very often, it is very likely that many soldiers learned how to formulate certain words by themselves. They used examples of letters similar to what they would see depicted on monuments from their surroundings, usually written in *scriptura monumentalis/capitalis monumentalis*².

This reality of the ancient Roman world is confirmed by the famous *Satyricon* passage, in which the *libertus* Hermeros was only able to recognize letters rendered on public inscriptions (*lapidarias litteras*)³. Early on, at Pompeii, a wax tablet tells us that *Quintus Aelius Romanus scripsi*

¹ See: Nedelea 2020.

² Raybould 1999, 164, referring to "moderate literacy"; At Troesmis, the name FLAVI appears on a small sized pot - See: Opait 1980, 328-366, Pl. VI/5.

³Petronius, Satyricon, 58: Non didici geometrias, critica et alogas naenias, sed lapidarias litteras scio, partes centum dico ad aes, ad pondus, ad nummum.

rogatu et mandatu Marci Barbati Celeris coram ipso quod is litteras nesciret⁴. In the year 164 AD, another *tabula cerata* from the Dacian province mentions that, at Alburnus Maior, *Flavius Secundinus scripsi rogatus a Memmio* Asclepi, quia se litteras scire negavit⁵.

Out of the ten analyzed wares discovered in the legionary fortress at Potaissa, four of them bear graffiti that denote personal property belonging to individual soldiers. Most of the time, when writing on them, the wares were usually turned upside down for better stability. The words were inscribed on the body or the foot of the vessels by using a sharp blade. As most of the words and letters are deformed, these graffiti seem to have been written with great difficulty. Lack of writing exercise, as well as the very durable fabric of the wares, have resulted in the distortion of the inscriptions. These property marks proved to be very useful when dining together within the contubernia of the barracks or the legionary baths⁶. The duty of washing the wares befall less experienced soldiers, freshly enrolled in the legion. From various sources we know that most of these new recruits would fulfil menial work, such as cleaning the latrines, procuring firewood and water, animal/stable care (stabula), or equipment maintenance7. Once cleaned, the wares had to be returned to their possessors. As many of the vessels looked the same, especially the Drag. 44 type bowls (plain sigillata, mass produced for the Potaissa legionary fortress), these property marks would help distinguish the goods (Pl. IV, VI/1). In this sense, an extremely interesting case was discovered in the perimeter of the western gate (porta decumana). A locally manufactured plain *sigillata* plate was marked with an "X" character (Pl. VI/2). Alongside stars/pentagrams, the "X" character is encountered very frequently on pottery finds within the military milieu. They were either batch markings (while still in the possession of the potters or the negotiatores), or had been used as distinguishable symbols by illitterati soldiers, who did not know how to spell their names. Researchers class these markings as "Pesudo-Inschriften"8, and examples identified at Colonia Ulpia Traiana/Xanten⁹ show that even though they were simple symbols, sometimes they were rendered with such clumsiness that characters like "X" and "V" could not be differentiated.

⁴ AE 1971, 92.

⁵ IDR I, 233, TC XI, no. cat. 41; Mrozek 1977, 95; Forrez 2009, 101.

⁶ Nedelea 2019, 148-152.

⁷ Herz 2007, 305-322; Dana et alii 2012, 49-56, Pl. I, fig. 1, Pl. II, fig. 2, retentura sinistra, C/2009.

⁸ Hanson 1991, 162; Harris 1989, 5.

⁹ Weiß-König 2010, 132; the "X" character = cat. no. 14, 16, 19, 22, 28, 30, 32, 34, 36, 45, 47, 56, 59, 60 etc.

Besides these four wares that bear *post cocturam graffiti* as property marks written in capital letters (*scriptura monumentalis*), the fortress yielded two cursive *graffiti* as well (**Pl. III, VIII**). One of them is an imported Curle 15 type plate, with a *post cocturam* message (?) written on its foot. The other is an *ante cocturam graffito* (cut before firing), rendered on a locally manufactured *dolium* that indicates the name of a potter - Aelianus – who could have activated in the 3rd century AD in one of the workshops at Potaissa¹⁰. The style of the two cursive *graffiti* is similar to "Die Älteren Römischen Kursive"¹¹. The elegance and care with which the *graffito* was executed on the Curle 15 type plate can be compared to that usually observed for *graffiti* discovered at Pompeii¹². This aspect indicates that the individual who wrote the message was used to writing frequently. The fact that this *graffito* had been discovered within the headquarters building is surely no coincidence, and perhaps it was rendered by one of the officers.

To these six graffiti we add two manufacturer stamps on two individual Dressel 24 type amphorae handles (HPAKAA)¹³ (Pl. VII/2-3), a titulus pictus on the same amphoric type (" [---]]]]") (Pl. VII/1), and a manufacturer stamp on a Drag. 37 type bowl from Rheinzabern (Ianuarius Fecit)¹⁴ (Pl. V). Functionality-wise, the majority of the graffiti and manufacturer stamps from Potaissa fall into the vasa escaria group i.e. vessels used for serving food. The triage of pottery finds during archaeological campaings could have contributed to the low frequence of graffiti on instrumentum domesticum (wares). On many occasions, only shards that could determine the typology of the wares were kept, whereas shards pertaining to the bodies of these vessels were discarded. Besides the rarity of ceramic *graffiti* within the fortress, the same situation was observed for manufacturer stamps on luxury wares that make their way to Potaissa, especially within the military camp. At first glance, it might seem strange that maker's stamps are almost completely missing from a legionary fortress, as in other smaller Roman military camps, rural settlements or cities within the Dacian province, stamps on Gallo-Roman terra sigillata are discovered frequently. However, after the analysis of the

¹⁰ Nedelea 2017, 83-106.

¹¹ Weiß-König 2010, 131.

¹² Milnor 2014, 72, 92, 94; CIL 4. 1852; CIL IV. 1649; CIL IV. 1939; CIL IV. 10619; CIL IV. 9123; CIL IV. 1520.

¹³ Bărbulescu 1987, 142; Bărbulescu 2010, 234-235, no. cat. 45-46, fig. 109-110, no. inv. 7845, 5537.

¹⁴ Bărbulescu 2010, 237, fig. 111, no. 47.

wares discovered within the legionary fortress at Potaissa was completed, the explanation for this phenomenon is quite simple.

Before the arrival of the Vth Macedonian legion, Potaissa was a small, uneventful *vicus*. Luxury products from potteries such as Lezoux, Westerndorf and Rheinzabern made their way here, but only in small numbers¹⁵. The arrival of the Vth Macedonian legion at Potaissa around the year 170 AD (in the context of the Marcomannic Wars)¹⁶ changed the fate of this *vicus* forever, triggering its quick development.

The end of the 2nd century AD also coincided with the decline of some of the most important potteries located in central Gaul. As the Marcomannic Wars extended until ca. 180-182 AD, the connection with workshops from eastern Gaul was temporarily interrupted as well¹⁷.

My ceramic analysis has indicated that for the entire operation period of the fortress, ca. 170-271 AD, *terra sigillata* imports from eastern Gaul made their way to the camp at Potaissa only in the form of approximately 120 individual wares, the vast majority of them being plain products. This represents only 1.2 % out of the total of ca. 10.000 individual wares that have been investigated. *Terra sigillata* from Lezoux is almost inexistent within this fortress. A similar situation was observed at Brigetio (Pannonia), where due to the wars, at the end of the 2nd century AD only very few *terra sigillata* vessels manufactured at Rheinzabern make their way there¹⁸.

Therefore, it is my opinion that the geographical, historical and economic context (at the end of the 2nd century AD and the first half of the 3rd century AD) hindered the supply of the Vth Macedonian legion with luxury wares, or, if the circumstances allowed it, this operation would have been too costly and difficult. This led to the development of a more lucrative affair, in the form of local military workshops at Potaissa, on nowadays Zânelor Hill¹⁹.

These new workshops were specialized in the production of simple luxury wares, in the form of local plain *sigillata* (imitations), meant to fulfill the needs for practical and good quality wares within the fortress. This is proven through the discovery of 2639 (locally manufactured) plain *sigillata* wares (out the total of ca. 10.000)²⁰, manufactured for the legion and purely for local use (from what is known

¹⁵ Cătinaș 2004, 83 - 97.

¹⁶ Eck 2016, 33-46.

¹⁷ CIL III 5937.

¹⁸ Hajdu 2018, 453.

¹⁹ Andone-Rotaru, Nedelea 2018, 69-90; Pîslaru 2011, 167-182; Pîslaru 2014, 95-106.

²⁰ Nedelea 2017, 83-106; Nedelea 2020.

so far). Thus, if the military workshops were producing wares only locally²¹ and for the fortress, manufacturer stamps were no longer needed, as the supplier and client were the same: *Legio V Macedonica*.

None of these 2639 plain *sigillata* wares from Potaissa bear maker's stamps, and this cannot represent a coincidence. Overall, they can be characterized as extremely simplistic, lacking any form of decoration. The basic shapes and plain style can almost denote the austere atmosphere that reigned within the camp. Their typologies imitate the shape repertoires of the famous Gaulish workshops at that time. It is very evident that the manufacturers have opted for a type of luxury ware that was obtained with ease, turning it into an affair that did not involve too many costs.

These wares were therefore a much cheaper version of the genuine terra sigillata vessels. Recent research has indicated that during the reign of emperor Marcus Aurelius, a Drag. 37 type bolw with relief decorations, manufactured in Cinnamus' workshop at Lezoux, valued approximately 5 *sestertii*. This was the equivalent of one and a half work days for a legionary soldier, and approximately three days for an auxiliary soldier²². The value of the luxury ware was provided by a graffito discovered in Noricum, municipium Flavia Solva, on the western bank of the Mur river (in today's Austria). The graffito reads: PANNA VIIRIICVNDAIIS IIMPTA VIGIIS, Panna Verecundaes empta viges(is). This was interpreted by R. Noll as "Verecundaes bowl, bought for twenty asses". It is one of the few direct sources regarding the real value of decorated luxury wares during the 2nd century AD. If the cost of this type of relief decorated wares was 20 asses, then surely, a plain *sigillata* vessel could have been acquired for much less. This is confirmed by yet another graffito, discovered at Iuvavum, Salzburg, on a LudTb/LudTa type plate, pertaining to the plain sigillata class, manufactured at Rheinzabern in the second half of the 2nd century AD23. The price of the vessel had been inscribed on its foot, namely "AS XII" (12 asses). An exact same price was observed at Colonia Ulpia Traiana/Xanten²⁴.

I can only presume that the locally produced plain *sigillata* wares (imitations) manufactured in the workshops at Potaissa valued much less than the previously mentioned genuine products, be it decorated or plain. Their cost was diminished through the use of visibly cheaper fabric and glaze, fired in ovens that did not reach the 1000 C degrees of the Gaulish

²² Noll 1972, 148-152; AE 2008, 1014.

²¹ Greene 1977, 116-123; Ciauşescu 2006, 143-146; Petruț 2018, 29-30.

²³ Wending 2012, 101-108; Kovacsovics 1987, 222-225; AE 2002, 1112.

²⁴ Weiß-König 2010, 161, no. cat. 106, XII - Zahlzeichen (Taf. 10).

ovens. Another factor that should be taken into consideration is transport. Supplying provinces along the Danube river with luxury wares produced in Gaul involved expensive transportation costs, which increased the prices of the products. It is my opinion that by locally manufacturing luxury wares at Potaissa, the Vth Macedonian legion was able to therefore obtain much cheaper goods. It also has to be noted that the local military workshops produced only certain types of wares. They pertained preponderantly to the *vasa escaria* group, such as bowls, plates and rarely cups or other shapes, whereas some are missing completely from their repertoire (pitchers and flagons). For example, the Drag. 44 type bowl (local imitation) was mass-produced for the fortress, as over 1000 such wares have been identified so far. Many of the graffiti were discovered on this type of bowl, which seems to have been the most popular vessel among the soldiers. It had a very practical shape, and, most likely, every soldier within the fortress used it, as it was ideal for serving the famous puls²⁵.

Even though *graffiti*, manufacturer stamps or *tituli picti* within the legionary fortress are not very frequent so far (**Pl. I**), they offer precious information regarding the level of education among the legion's soldiers, their civilian contacts, as well knowledge regarding the military unit's commercial relations with other provinces. Therefore, they represent a precious insight into the Dacian economy at that time.

A. Legionary Barracks:

1. Praetentura Dextra.

• *Graffito* - "LVM" (*post cocturam*), indicating the client or owner of the wares (Pl. II).

a) Physical characteristics²⁶: Drag. 15/17 type bowl (import); 40% of its initial shape has been recovered (17 shards); oxidized firing; smooth surface; fine, compact fabric (Munsell 2.5 YR, 7/6 Light Red); small-sized inclusions within the fabric composition; a narrow, elegant groove separates the rim from the rest of the body; the wall of the body is oblique and slightly curved; a red metallic engobe (Munsell 2.5 YR, 5/8 Red) has been applied on the whole surface of the body, except the foot; R.d. 24 cm; R. t. 9,03 mm; W.t. 9,90 mm; W. h. 99,56 mm; F.d. 12 cm; F.h. 9,65 mm;

²⁵ Nedelea 2016, 107; Nedelea 2019, 186, fig. 352; for the military diet, See: Roth 1999, chapter I, 18.

²⁶ R.d. = Rim diameter; R.t. = Rim thickness; Rib t. = Rib thickness; Rib w. = Rib width; W.t. Wall thickness; W.h. = Wall height; F.d. = Foot diameter; F.h. = Foot height; F.w. = Foot width; HMTurda = History Museum Turda.

F.w. 9,85 mm; a *post cocturam graffito* was rendered on the exterior surface of the body, reading: "LVM"; the *graffito* measures: 28,95 mm x 69,59 mm. Location of discovery: Turda (Cluj County); ancient name - POTAISSA; legionary fortress; "west to the *thermae*"; S3; portico hole; depth – not mentioned; 05.08.2002. Stored at the History Museum Turda; Inv. No. 21.652.

b) Historical interpretation: the *graffito* was cut after firing, on the exterior surface of the bowl, with letters specific for *scriptura monumentalis*. The inscription reads "LVM" (similar to *tegulae* stamps), namely the initials of the military unit: LEGIO V MACEDONICA. The letters were inscribed very close to the rim, covering a large surface of the bowl's upper body. Unlike the *graffiti* etched by soldiers at Potaissa, the initials of the legion were written while the vessel was sitting upright, and not upside down. It is hard to tell if the inferior register, situated right underneath the legion's initials, could have yielded some additional information, such as the price of the product (similar to those from Iovavum or Flavia Solva²⁷), as this part is missing.

Due to practical reasons, the graphic reconstruction and photographic representations (Pl. II) showcase only two of the seventeen shards pertaining to the bowl. However, it should be noted that the letters LVM are very close to each other and flanked on both sides by large, empty fields. Therefore, it is an absolute certainty that the letters did not represent the middle or the last part of a different word. They stood by themselves as the legion's initials.

The metallic engobe (Munsell 2.5 YR, 5/8 Red) and the superior quality of the fabric suggest that the vessel was not manufactured at Potaissa²⁸. It is my opinion that the Drag. 15/17 type bowl (imported plain *sigillata*) was brought to Potaissa by soldiers while moving from their old garrison. A handful of other wares, specific to the moesian region, were recovered from the legionary fortress as well. The Drag. 15/17 type bowl was moved to the new location due to its quality and value, and it was most likely a component of an earthenware set. This supposition is strengthened by the discovery of an identical bowl in the *praetentura sinistra* of the fortress (S5/2014; C8-15; h. 0.60-0.70). The second bowl did not bear any *graffiti*.

It is possible that this type of marking, depicting the legion's initials, could have served as a method through which ceramic batches that had different clients and destinations were separated or distinguished. Before making their way to their customers, the vessels

²⁷ Wending 2012, 101-108; Kovacsovics 1987, 222-225.

²⁸ Nedelea 2016, 185-202, pl. 3/1.

were marked by either the potters, in their workshops, or by *negotiatores* who were attracted by the purchasing power of the military units and soldiers²⁹.

Therefore, the Drag. 15/17 type bowl from the legionary fortress could have been a part of a larger order containing more identical wares. One of them was inscribed with the initials of the client, *legio V Macedonica*/"LVM", for transporters to know where the shipment was supposed to be delivered. The order was most likely transported³⁰ to the former fortress at Troesmis, and at least two wares of this larger order have been brought to the new garrison at Potaissa (one discovered in the *praetentura dextra*, the other in the *praetentura sinistra*). Further archaeological investigations will prove if any other similar wares made their way into the camp. The production center of the wares is thus far unknown, but it is certain that they were not produced at Potaissa.

2. Praetentura Sinistra.

• *Graffito* - "[A]elianus" (*ante cocturam*), indicating the name of the potter (Pl. III).

a) Physical characteristics: *Dolium* (locally manufactured); only one shard remains, representing approximately 15% of the initial forms of the vessel; oxidized and even firing; fine, compact fabric, slightly sandy at touch (Munsell 2.5 YR, 7/8 Light Red); medium quality; small inclusions within the fabric composition (1%); W.t. 8,73 mm; the outer surface was painted with large, brown brush strokes; a *graffito* was inscribed on the outer surface before firing, reading: "[A]elianus". Location of discovery: Turda (Cluj County); ancient name - POTAISSA; legionary fortress; *praetentura sinistra*; S10/S05 - 2014; G1; depth - 1,75 m; 20.10.2014. Stored at the History Museum Turda; Inv. No. 19835.

b) Historical interpretation: the *dolium* on which the *graffito* was inscribed belongs to the common ware category, and only one shard has been recovered during archaeological excavations. This type of wares were locally manufactured in the workshops situated on nowadays Zânelor Hill, and quite frequently used within the fortress to store grain, flour and other goods. In the headquarters building, on the eastern flank, several *dolia* were placed on the portico, right next to the entrance to room L.

I was able to observe the same pattern and custom for the legionary barracks as well, as the majority of the *dolia* finds concentrate

²⁹ Piso *et alii* 2016, 406, "negotiator/negotiatores", CIL III 1068 = IDR III/5, 190; CIL III 14216, 11 = IDR II 47 etc.

³⁰ Kuzmová 2008, 143-154.

on their porticos, where they were most likely stored. The shard bearing the graffito has been recovered from the barracks situated in the praetentura sinistra³¹. The graffito reads: "[A]elianus", and it offers very valuable information, as this is the name of a local, evidently masculine, potter. The inscription was etched ante cocturam by the potter itself, who was labelling his work. Obviously, this implies that his work was already known at Potaissa and the potter hoped for people to recognize and buy his wares. An interesting aspect regarding this *graffito* is the use of cursive Latin script (as used in handwriting), with beautifully rendered letters, as opposed to the clumsy property marks inscribed by soldiers, in capital letters. Writing did not seem to be a difficult task for the potter. His precise letter execution expressed a certain level of literacy. In total, I was able to distinguish seven cursive Latin letters, written horizontally, in the same row. The letters follow the line of the small groove that ornates the body of the vessel. The graffito was etched into the crude fabric with the help of an improvised writing tool, namely a small branch. The inscription is preserved almost completely, with the exception of the first letter, "A", and the left half of the second letter "e", which had been represented by two parallel lines ('II'). After firing, the dolium was decorated with diluted paint, that covered the letters of the inscription as well. It is my opinion that this name represents one of the potters that activated in the 3rd century AD in one of the workshops at Potaissa, on Zânelor Hill. Even though potter names are frequent discoveries within other provinces³², in Roman Dacia, such finds are rare thus far, underlining once more the importance of the graffito identified at Potaissa.

3. Latus Praetorii Dextrum. Cohors I Milliaria.

• *Graffito - "*A NIR[---]" (?; *post cocturam*), indicating the owner of the vessel (Pl. IV).

a) Physical characteristics: Drag. 44 type bowl (locally manufactured); 25% of the initial form has been recovered (3 shards); oxidized and even firing; smooth surface; fine, sandy fabric (Munsell 5 YR, 7/8 Light Red); very good quality; R.d. 26 cm; R.t. 17,66 mm; R.w. 19,95 mm; W.t. 9,61 mm; the distance between the rim and the rib equals 28,96 mm; Rib t. 16,49 mm; Rib w. 21,01 mm; small inclusions, in the form of fine, white stones (1%); red metallic engobe on the whole surface of the body (Munsell 2.5 YR, 5/8 Red); *post cocturam graffito* in the lower register

³¹ Nedelea 2017, 83-106.

³² Evans 1987, 202; For example, the names of over 250 potters who activated in Britannia are known to this day. See: Finn 2013, 1-6.

of the body, right underneath the rib, reading: "A NIR[---]"/ "A NIA[---]"//, VIN V [---]" (?). Location of discovery: Turda (Cluj County); ancient name - POTAISSA; legionary fortress; S/A, room H; 03.08.1990; Stored at the History Museum Turda; Inv. No. 12.794.

b) Historical interpretation: the graffito had been etched by a soldier on a Drag. 44 type bowl, pertaining to the locally manufactured plain sigillata group, and mass-produced for the legion. Towards the end of the 2nd century and the 3rd century AD at Potaissa, as well as the military milieu of Roman Dacia, this type becomes one of the most popular wares due to its very practical shape. All the characteristics indicate that the bowls could have been used for communal meals as well. Therefore, it is not surprising at all that this type of inscription was identified in barrack no. IV (Room H) of latus praetorii dextrum/cohors I milliaria. Even though the letters are very clear and well preserved, the graffito presented several difficulties when deciphering it. The letters are so schematic and distorted that it is uncertain if the bowl should be kept upright or upside down when reading it. If we take into consideration the duct of the letters, the bowl sat upright when the letters were inscribed onto it. The blade of the knife stopped in the rib situated on the middle of the body, specific to the Drag. 44 type bowl. Therefore, there are a few interpretation possibilities: a) A NIR[---]"; b) "A NIA[---]"; c) "VIN V [---]". It most likely depicted a property mark, namely the *cognomen* of one of legio V Macedonica's soldiers.

4. Retentura.

• Manufacturer stamp – IAN[V(arius) F(ecit)]³³ (Pl. V):

The maker's stamp was placed on a Drag. 37 type bowl, manufactured at Rheinzabern, in eastern Gaul. The bowl was discovered in 1977, in the *retentura* region of the legionary fortress at Potaissa, right outside barrack no. IV of a *cohors quingenariae*³⁴. Only a small portion pertaining to the upper body of the bowl has been recovered during archaeological investigations. The fact that the shard belongs to the upper register of the bowl is indicated by the decorative strip bearing ovolos, specific for relief decorated *terra sigillata*. The main ornamental motifs of the bowl appear right underneath this strip, in the form of Cupids and vegetal elements.

Only the first three letters of the stamp have been preserved throughout time, reading "IAN". Based on the decorative elements and other analogies identified within the Roman Empire, the stamp should be

³³ Cătinaş 2004, 83-97.

³⁴ HMTurda inv. no. 4132.

read IAN[V(arius) F(ecit)]³⁵, as initially published in 2004³⁶, even though in the last 2010 publication it appears in the form IAN[V(s) F(ecit), without any further explanations³⁷. This translates to "Ianuarius made this". The popularity of the name is increased among potters who activated in eastern Gaul workshops, whereas in central and southern Gaul it appears quite rarely. Within the Roman Empire, the name is one of the most preferred calendrical *cognomina*, having auspicious connotations³⁸.

As a decorative motif, Cupid holding a torch in his right hand appears frequently throughout the 2nd and 3rd centuries AD. It was often utilized at Rheinzabern on Drag. 37 type bowls, within the repertoires of potters like SATTO (without torch), BELSVS, CERIALIS, COMITIALIS and REGINVS³⁹. However, the luxury vessel identified at Potaissa was with certainty produced in Ianu(arius) I's workshop, based on the following elements: a) Cupid is flanked by two simple vegetal elements; b) the IANVF stamp had been placed within the decorative field; c) the ovolos are coupled with tongues⁴⁰; d) decorative rope strip that dates this product between 130-150 AD⁴¹.

The presence of such early dated wares within the legionary fortress at Potaissa is quite curious, as the garrison was only built after the year 170 AD. In Pannonia for example, Ianuarius I's wares appear only in the stratigraphical contexts connected to the events between the years 170-180 AD⁴². Therefore, the only manufacturer stamp identified on tableware discovered within the legionary fortress at Potaissa, does not coincide with the interval in which the garrison operated. The "birth" date of the bowl precedes that of the fortress by approximately 20 years. It is known that, due to their high value (around 20 asses), these luxury wares were very well taken care of, repaired in special workshops if needed, and even kept for generations. The bowl could have been brought to Potaissa by the soldiers, or, it made its way into the fortress from areas surrounding it.

³⁵ Ludowici 1942, Taf. 005, 010, Taf. 007, 012, Taf. 001, 004a; Ricken, Thomas 2005, 15-25, Tafel 1-8.

³⁶ Cătinaș 2004, 85, fig. 4, 2.

³⁷ Bărbulescu 2010, 237, fig. 111, cat. no. 47; for the etymology of the *cognomen* IANVS, See: Ernout 1956, 117-119.

³⁸ Kajanto 1965, 60-61, 218-219.

³⁹ Oswald 1964, 46, pl. XXIII (Cupids and Putti)/456, no. 456.

⁴⁰ Polak 2000, 59-64.

⁴¹ Gabler *et alii* 2009, 205-324.

⁴² Gabler 1987, 78, 81; Gabler, 2002, 231.

B. Legionary Thermae:

• *Graffito*: "VIV[---]" (*post cocturam*), indicating the owner of the vessel (Pl. VI/1).

a) Physical characteristics: Drag. 44 type bowl (locally manufactured); only 15% of the initial form has been recovered, pertaining to the foot of the bowl (one shard); oxidized and even firing; smooth surface; fine, compact fabric (Munsell 5 YR, 7/8 Light Red); very good quality; F.d. 104,36 mm; F.t. 6,78 mm; W.t. 6,00 mm; F.w. 12,45 mm; big-sized inclusions, in the form of white stones (1%); red matte engobe, applied in a hurry, which resulted in paint dripping towards the foot of the bowl (Munsell 2.5 YR, 5/8 Red); most of the engobe has been chipped off the surface of the body; *graffiti* on the lower register of the bowl: "VIV[---]". Location of the discovery: Turda; ancient name - POTAISSA; legionary fortress; *thermae*; basement of room K; depth - 0,90-1,10 m. Stored at the History Museum Turda; Inv. No. 21774.

b) Historical interpretation: so far, within the legionary fortress, the biggest quantity of earthenwares has been discovered inside the military baths, totalling to 2323 individual wares⁴³. One of these vessels is yet another Drag. 44 type bowl, which bears the following *graffito*: "VIV[---]". It was discovered in one of the most interesting spaces pertaining to the military baths, namely the basement of Room K, which was also heated. Recently, I was able to prove that at Potaissa, the spaces of the *thermae* were not used for purely hygienic reasons. Throughout time, they had also turned into social spaces. The soldiers were enjoying at least some of their free time in the baths, outside the claustrophobic spaces of the *contubernia*.

Based on my ceramic analysis I was able to establish that the soldiers consumed food and drinks within these rooms, similarly to other baths within the Roman Empire. The spaces adjacent to the *thermae* edifice were equipped with *praefurnia*, and had also been turned into small kitchens and bakeries⁴⁴. Due to strong social activity within the baths, it is no surprise that one of the *graffiti* depicting property marks was discovered here. The name had been etched *post cocturam* by one of the soldiers, in the lower part of the body, while the bowl was sitting upside down. It most likely depicted the name of the owner, so that his vessel could be distinguished from other identical wares within the same space.

⁴³ Bărbulescu *et alii* 2019, 182.

⁴⁴ Bărbulescu et alii 2019, 187 sqq.

C. Porta decumana:

• Graffito - "X" (post cocturam), indicating the owner of the vessel (Pl. VI/2).

a) Physical characteristics: Curle 23 type plate (locally manufactured); only 25% of its initial forms have been recovered (one shard); oxidizing firing; smooth surface; fine, sandy fabric (Munsell 2.5 YR, 7/4 Light Reddish Brown); good quality; R.d. ? cm; W.t. 8,05 mm; R.t. 4,38 mm; small-sized inclusions, in the form of little white stones (1%); red engobe with matte aspect, which almost completely flaked off the surface of the body (Munsell 2.5 YR, 5/8 Red); *graffito – "X"*. Location of discovery: Turda (Cluj County); ancient name - POTAISSA; legionary fortress; *porta decumana*, over the middle buttress of the gate; July 1976. Stored at the History Museum Turda; Inv. No. 19570.

b) Historical interpretation: the "X" symbol was cut *post cocturam* into the exterior surface of a Curle 23 type plate (lower register of the body), with relatively long strokes. The plate pertains to the locally manufactured plain *sigillata* group.

Alongside Curle 15, these types of plates were quite popular within the legionary fortress and very frequently used by soldiers. Even though some researchers believe that the "X/cross" graffiti could represent batch marks, spindle hole markings, or symbols denoting capacity⁴⁵, it is my belief that our example represented an ownership mark. This supposition is strengthened by the fact that, at Potaissa, most graffiti indicating an individual's property are rendered on the lower part of the body, close to the foot of the vessel. It is possible that the soldier who wanted to mark his property did not know how to write his own name, and therefore utilized a more simplistic way of distinguishing his goods. The lines of the graffito are very shaky and clumsy, and it can be classed as a non-literate inscription or "Pseudo-Inschrift".

D. The Legionary Headquarters Building (principia):

Archaeological campaigns within the headquarters building at Potaissa have been carried out between 1974, 1978-1989, 1994-1995, 2008-2011. The ceramic lot identified and analyzed for this edifice totals to 1543 individual wares. Only four bear *graffiti*, *tituli picti* and manufacturer stamps. All of them were rendered on imported products, such as samian ware or *amphorae*.

⁴⁵ Going 1992, 108.

1. "The *amphorae* warehouse" of the headquarters building.

During the 3^{rd} century AD, a series of modifications were undertaken on the eastern flank of the headquarters building. The wall between rooms O (9,20 x 9,90 m) and P (10,40 x 9,50 m) was torn down, transforming the northern wing into a large warehouse⁴⁶. The discovery of 484 *amphorae*⁴⁷ and 199 amphoric lids lead to the conclusion that this part of the *Principia* had been used only for logistical purposes⁴⁸.

My analysis has led to the identification of five main amphoric types (Dressel 20; Dressel 24/Zeest 90/Dyczeck 25; Dressel 24/Similis; Kapitän II; Zeest 84). From previous research, it was believed that the main imported product was olive oil, brought here from the oriental region of the Empire⁴⁹. Indeed, the legionary fortresses' main comodity was *oleum*, much needed for the soldier's daily rations, while wine and fish products were discovered in smaller quantities (for products transported in *amphorae*). Three of the *amphorae* within this warehouse have yielded one *titulus pictus* and two manufacturer stamps.

• *Titulus pictus*: "[---]JJJ", denoting the container's capacity (Pl. VII/1).

The only *titulus pictus* from the legionary fortress at Potaissa has been identified on a Dressel 24 amphora shard. There are only seven such containers in the entire garrison, and all of them have been recovered from the headquarters building⁵⁰. Regarding its origins, some researchers believe that possible production centers could be located along the Pontic shores (Histria), as well as in Dalmatia or the Aegean islands⁵¹. In Moesia Inferior, Dressel 24 *amphorae* have been attributed to the 1st-3rd centuries AD (Novae, Troesmis, Histria, Aegysus, Halmyris, Noviodunum, Dinogetia, Sacidava, Durostorum, Tropaeum Traiani⁵²). In Pannonia, they are known from three main sites along the Limes (Brigetio, Aquincum and Intercisa) and normally associated with contexts pertaining to the 3rd century AD⁵³.

⁴⁶ Bărbulescu 1987, 142, fig. 28, pl. XIV/3; Bărbulescu 1994, 101.

⁴⁷ Initially, it was believed that the warehouse held 100 *amphorae* and 500 lids. See: Bărbulescu 1987, 142.

⁴⁸ Bărbulescu 1994, 125-126, Bărbulescu 2010, 213, no. 25.

⁴⁹ Bărbulescu 1987, 142.

⁵⁰ HMTurda inv. no. 9277, 9253, 9252, 5973, 5945.

⁵¹ Scorpan 1976, 162; Opaiț 1980, 296, Pl. IV/1; Dyczek 2001, 182-183; Hárshegyi 2004, 113-121; Dyczek 2005, 70-80; Dyczek 2016, 563-570; Krapivina 2010, 69-73.

⁵² Paraschiv 2002, 165-207.

⁵³ Kelemen 1993, 50; Hárshegyi 2004, 113-121.

In Dacia, similar amphora were recovered from Drobeta, Romula, Buridava, Slăveni, Stolniceni, Sucidava, Corabia⁵⁴, and Cioroiu Nou⁵⁵. At Tibiscum for example, one of them bears a *titulus pictus* that reads "AIVS", and the find has been largely dated between the 2nd and 3rd centuries AD⁵⁶. At Corabia (Olt County), a dipinto reads "ΔΡΧΠΞ", the greek equivalent of 82 *sextarii* (44-45 litrers)⁵⁷. Other similar *dipinti* have been discovered at *Drobeta*, *Dierna*, *Slăveni* and *Angustia*⁵⁸.

At Potaissa, the *dipinto* was discovered only by chance, while cleaning the ceramic material from the amphoric warehouse. One shard stood out due to a little red drop of paint on its surface. I proceeded to remove the layers of limestone with the help of a needle tip and a blade, which revealed three letters or numerals. Unfortunately, the left part of the *dipinto* is missing, and the only part that was preserved contains its last three numerals.

The marking (most likely) denoted the container's capacity in *sextarii* (or its greek equivalent), reading: "...JJJ". The letters are parallel and slightly oblique. They are equally sized (3 cm height), and rendered with a thick layer of red, glossy paint.

From the shard that was preserved, which also contains one end of a broken handle, we can tell that the *titulus pictus* was placed in the middle part of the container's body. The discovery of this marking under layers of limestone indicates the importance of having clean wares while analysing them. The large quantities of wares which are stored in museum warehouses without to be properly cleaned could yield precious information in the future.

• Manufacturer stamps: HPAKΛA⁵⁹ (Pl. VII/2-3).

Next to the *titulus pictus*, two of the Dressel 24 amphora bear their manufacturer's stamp, reading: HPAKAA. The writing is encased in a cartridge for both stamps. For one of them, the letters were rendered in mirror reverse on the 'mold', so that the actual design was correctly read when pressed into clay. This allows for a normal lecture of the letters, from left to right. The other stamp was written normally in the "mold", resulting in a mirrored image of the word when pressed into clay. In past

⁵⁴ Dyczek 2005, 70-80; Tudor, 1968, 467; Bondoc 2016, 215-229, pl. V/fig. 3.

⁵⁵ Bondoc 2014, 105-112, fig. 13 a-b.

⁵⁶ Ardeț 2006, 322, pl. XIV/126; Rusu-Bolindeț *et alii* 2018, 161, no. 431, Tibiscum, MJERGC inv. no. 1735.

⁵⁷ Tudor 1968, 467.

⁵⁸ Ardet 2006, pl. XIV/126, fig. 137, pl. XV/127, fig. 138, pl. XVI/133, fig. 139, pl. XVII/140, fig.140; XVIII/159, fig. 134; Ardet 2009, 64; Bondoc 2016, 215-229, pl. VIII/5-7.

⁵⁹ Bărbulescu 2010, 234-235, no. 45-46, fig. 109-110

publications, it was believed that this type of stamp belonged to Dressel 20 *amphorae*⁶⁰. However, based on recent research and numerous similar discoveries, I can with certainty say that our finds are Dressel 24 amphoras. In Dacia, the same manufacturer's stamps have been recovered from Drobeta, Romula etc⁶¹. On other sites, on the same amphoric type, the following manufacturer stamps have been observed: IIAYAOY (Drobeta and Romula)⁶², MAPKOY (Romula and Tibiscum)⁶³, TATIANOY, MANTEIOY, KOPOY, CTPATONEIKOY etc. (Drobeta, Romula, Sucidava and Tibiscum)⁶⁴.

2. The courtyard (Forum militare).

• *Graffito*: "Hic Fuit..." (?), cursive Latin script (*post cocturam*) (Pl. VIII).

a) Physical characteristics: Curle 15 type plate (import); oxidized firing; smooth surface; fine, compact fabric; (Munsell 2.5 YR, 7/8 Light Red); R.d. 26 cm; R.t. 8,75 mm; W.t. 7,49 mm; very good quality; small-sized inclusions, in the form of little white stones (1%); red, metallic engobe on the whole surface – slightly flaked on certain areas (Munsell 2.5 YR, 5/8 Red); small groove on the rim; *graffito* – "Hic Fuit..." in cursive Latin script. Location of discovery: Turda (Cluj County); ancient name - POTAISSA; legionary fortress; *forum militare*; C01 – pit. Stored at the History Museum Turda; Inv. no. 20755.

b) Historical interpretation: the *graffito* was inscribed on a Curle 15 type plate, pertaining to the category of plain *sigillata* imports (Rheinzabern). It was discovered in one of the construction pits from the headquarters' building courtyard, which made me conclude that the plate arrived in the fortress in its initial stages of operation. After it broke, it was discarded and buried.

The Curle 15 type plates are known for their specific shape, with a large basin and a wide, horizontal bottom. Their foot was usually tall and very elegant. The plate had been turned upside down to be able to inscribe on the very durable fabric of the genuine luxury ware (in a similar fashion to a recently published vessel from Buciumi⁶⁵), that require brutal force to break. The *graffito* was etched on the lower register of the body, right on the edge of the horizontal bottom, along its

⁶⁰ Bărbulescu 1987, 142; Bărbulescu 2010, 234-235, no. 45-46, fig. 109-110, inv. no. 7845, 5537.

⁶¹ Popilian 1974, 137-146, pl. 3/3.

⁶² Popilian 1976, 172, pl. XV/199; Dyczek 2005, 70-80; Ardeț 2006, fig. 96-97; Ardeț 2009, 64.

⁶³ Benea 2000b, 438, fig. 2/1; Ardet 2006, fig. 118-119

⁶⁴ Benea 2000b, 437-438; Ardeț 2006, fig. 117; Ardeț 2009, 64.

⁶⁵ Dana, Petruț 2015, 19-24, Zanax, milis (centuria) Genia[lis].

diameter. A very sharp and pointy object had been used as a writing tool, and it is the only cursive, *post cocturam graffito* on earthenware from the legionary fortress. The field of the inscription is heavily damaged, being overlapped by secondary scratches and limestone deposits. This makes the graffito very difficult to read. The letters were rendered in two (?) rows. Their dimensions vary between 0.6 and 6 cm, and they form 3 separate words in the upper register, followed by a "X" symbol (?) in the lower register. All the words seem to start with capital letters ("P", "S" and "I"), if the first letter of the last word is not an inverted C, representing the symbol for centuria/7. The upper register counts 14-15 glyphs. Unfortunately, the plate is broken right in the middle of the graffito, which was surely continued along the edge of the vessel. Besides the "X" symbol, all the letters were rendered in cursive Latin script, which denotes a very good knowledge of the Latin language. Also, out of all the graffiti identified on pottery within the legionary fortress at Potaissa, this particular inscription is the most complex one, involving grammer and phrasing.





Proposal regarding the lecture of the letters, in their order:

1. H (or **P**) – cursive capital letter with "flowery" aspect, similar to the recently published vessel from *Arcobara*/Ilişua⁶⁶. It could also represent a V (U) or D. The bottom of the main line is emphasised towards the right.

2. \mathbf{i} – lowercase cursive. The connection between the "X" symbol of the lower register and the letters "H" and "i" is unclear, as it occupies a space between these two.

3. c – lowercase cursive, the last letter of the first word.

⁶⁶ Dana et alii 2012, 49-56, PRISCI DVPL.

4. S (or **F**) – cursive capital letter, filiform; it is the biggest letter of the entire *graffito*.

5. u – lowercase cursive, of rectangular shape, slightly tilted to the left.

6. i – lowercase cursive, similar to the second letter of the first word; the main line is emphasised at the bottom, towards the right;

7. e – lowercase cursive, a form frequently encountered in *graffiti* etched on *tegulae* within the province (it could also be a **t**, **k**, **f** or **g**)⁶⁷.

8. I – cursive capital letter; it could also represent an inverted C, the symbol for *centuria*/7.

9. o – lowercase cursive, slightly rectangular, most likely due to the durability of the fabric, which much rather permits the etching of straight lines.

10.1 – lowercase cursive, in the shape of an L with a short leg.

11.s – lowercase cursive.

12.a – lowercase cursive; it could also be a "c" or "u".

13.i - lowercase cursive; it could also be a "u" or "e".

14.+ 15. = r or R.

Even though the individual who wrote the *graffito* seems to have been used to writing, many of the glyphs are schematic, and they could be read in more ways:

• **4+5** su[m] - "I am" of... (the vessel pertains to the person who wrote the *graffito*, his name following afterwards in the genitive case). It would therefore represent an ownership mark.

• **1+2+3+4+5+6+7** *"*Hic Fuit" - *"*This was…" followed by the name of the individual.

• **5+6+7+8+9+10** "[ante diem] III (tertium) K(alendas) Iul(i)", considering 5+6 as number III, and the "k" as a "7". *Graffiti* denoting dates are common on wares, however, in this case it does not make sense after the letter "S".

• 8+9+10 "7 (*centuria*) OL... (VL)..." – "(from) the *centuria* of..".

It is unclear if the *graffito* represents a message, title, date, or name. The "X" symbol could denote a batch mark, inscribed on the surface of the plate before it left the workshop by potters, or even by *negotiatores*, who were trying to distinguish certain goods. Otherwise, such symbols represent either ownership marks, etched by illiterate soldiers, or, rarely, a combination between letters as a result of a rushed

⁶⁷ Voloșciuc 2007, 57-68.

inscription. A similar case can be observed at Pompeii. On the walls of a basilica, Pyrrhus expresses his condolences for the fictitious death of his friend Chius, in the form of a joke (*Pyrrhus Chio conlegae salutem moleste fero quod audivi te mortuom itaque vale*)⁶⁸. The last two letters of the world "vale" (be strong) are so deformed and elongated, that the combination between the letters "L" and "E" appears in the form of an "X", similar to that from Potaissa⁶⁹. It is therefore not excluded that the "X" symbol from the legionary fortress could have represented two elongated lines of two separate letters, one visible (between "H and "ic"), while the other was rendered in the now missing part of the plate.

Conclusions

Even though not numerous, the earthenware *graffiti* discovered within the legionary fortress at Potaissa (**Pl. I**) give ample evidence that the civilians (potters) as well as the soldiers, were at least somewhat literate or fluent in Latin, especially when paired with *graffiti* and inscriptions on other materials from the same garrison. The earthenware *graffiti* can be loosely divided in two main types, namely literate (names/ownership marks) and non-literate (symbols). They were cut both before or after firing, but the latter are evidently the most numerous. Most of the *graffiti* occurred on locally manufactured *sigillata*, especially Drag. 44 type bowls. So far, most of these are ownership-inscriptions and they only give evidence that some soldiers were able to write their own names. One of the most important names so far, is that of Aelianus, potter in the local workshops at Potaissa, whos common ware products seem to have been valued and sought after by locals, in the 3rd century AD.

The most peculiar *graffito* was identified in the headquarters building. Due to the high value of the genuine luxury ware (approximately 12 asses), the *graffito*'s complexity and Pompeian-like appearance, it was most likely written by one of the officers.

Manufacturer stamps are *rara avis* within the Potaissa legionary fortress, and appear only on long-distance imported ware, such as Dressel 24 *amphorae* and eastern gaulish *sigillata*. Only one *titulus pictus* was identified thus far, by chance. However, I am very confident that future research and the proper mechanical and chemical cleaning of the *amphorae* will result in wider repertoire of *dipinti* within the Potaissa legionary fortress.

⁶⁸ CIL IV. 1852.

⁶⁹ Milnor 2014, 168, fig. 3.5.

References

| IDR I | Ioan I. Russu, Inscripțiile Daciei Romane, Vol. I. Introducere istorică și epigrafică. Diplome militare. |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Andone-Rotaru, Nedelea 2018 | Tăblițe cerate. București 1975. M. Andone-Rotaru, L. Nedelea, The Pottery Workshops at Potaissa. In: Viorica Rusu-Bolindet, Cristian-Aurel Roman et al. (eds.), The Atlas of Roman Pottery Workshops From The Provinces Dacia And Lower Moesia/Scythia Minor (1st-7th centuries AD) (I), Cluj-Napoca 2018, 69-90. |
| Bărbulescu 1987 | M. Bărbulescu, Din istoria militară a Daciei romane. Legiunea V Macedonica și castrul de la Potaissa, Cluj- Napoca, 1987. |
| Bărbulescu 1997 | M. Bărbulescu, Das Legionslager von Potaissa (Turda)/Castrul legionar de la Potaissa (Turda). Führer zu archäologischen Denkmälern in Dacia Porolissensis Nr. 7/Ghid al monumentelor arheologice din Dacia Porolissensis nr. 7, Zalău, 1997. |
| Bărbulescu 2010 | M. Bărbulescu, Inscripțiile din castrul legionar de la Potaissa/The inscriptions of the legionary fortress at Potaissa, Cluj-Napoca, 2010. |
| Ciauşescu 2006 | M. Ciauşescu, A Roman pottery assemblage from the legionary fortress at Apulum. In: D. Bondoc (ed.), In honorem Gheorghe Popilian, Craiova, 2006, 142–162. |
| Dana et al. 2012 | D. Dana, C. Gaiu, R. Zăgreanu, Un nou duplicarius din ala I Tungrorum Frontoniana atestat pe un vas descoperit în castrul roman de la Arcobadara/Ilişua, RB, 26, 2012, 49-56. |
| Eck 2016 | W. Eck, Die Lex Municipalis Troesmensium: Ihr Rechtlicher und Politisch-Sozialer Kontext. In: CG. Alexandrescu (ed.), Troesmis – A Changing Landscape. Romans and the Others in the Lower Danube Region in the First Century BC – Third Century AD, Cluj Napoca, 2016, 33-46. |
| Evans 1987 | J. Evans, Graffiti and the Evidence of Literacy and Pottery Use in Roman Britain, Archaeological Journal, 144, 1987, 191–204. |
| Ernout 1956 | A. Ernout, Consus, Ianus, Sancus. In: Redard G. (ed), Hommages a Max Niedermann, Bruxelles: Collection Latomus, 23, 115-121. |

Forrez 2009
R. Forrez, Cupidae legum iuventuti. Een kennismaking met de Instituten van Justinianus. Didactica Classica Gandensia 49, Gent 2009.
Fulford 2018
M. Fulford, Procurator's Business? Gallo-Roman

Sigillata in Britain in the Second and Third Centuries AD. In: A. Wilson, A. K. Bowman (eds.), Trade, Commerce, and the State in the Roman World, Oxford, 2018, 301- 325.

- Gabler 1987 D. Gabler, Einige Besonderheiten der Verbreitung der Rheinzaberner Sigillaten in Pannonien, BVBl, 52, 75-104.
- Gabler 2002 D. Gabler, Terra sigillaták az aquincumi canabaeból/Terra Sigillaten aus den Canabae Legionis von Aquincum, BudRég, 35, 227-266.
- Gabler et aliiD. Gabler, A. Márton, E. Gauthier, La circulation des2009sigillées en Pannonie d'après les estampilles sur
sigillées lisses de Gaule, de Germanie et de la Région
danubienne, RAE, 58, 180, 2009, 205-324.
- Gavrielatos 2012 A. Gavrielatos, Names on Gallo-Roman terra sigillata (1st-3rd c. A.D.), PhD Thesis, The University of Leeds, School of Classica, October 2012.
- Going 1992 C.J. Going, The other pottery' in Wickenden, N.P. The Temple and Other Sites in the North-eastern Sector of Caesaromagus, Counc. Brit. Archaeol. Res. Rep. 75, 1992, 93-115.
- Greene 1977 K. Greene, Legionary pottery and the significance of Holt. In: J. Dore/K. Greene (eds.) Roman Pottery Studies in Britain and Beyond, BAR Suppl. Ser. 30, Oxford, 1977, 113–132.
- Greene 1990 K. Greene, The archaeology of the roman economy, California, 1990.
- Hajdu 2018B. Hajdu, Terra sigillata from the territory of the civil
town of Brigetio, DissArch Ser. 3. No. 6, 2018, 445–460.
- Hanson 1991A. Hanson, Ancient Illiteracy. In: J.H. Humphrey (ed.),
Literacy in the Roman World, JRA Ser. 3, 1991, 159-198.
- Harris 1989 W. V. Harris, Ancient Literacy, Cambridge 1989.
- Herz 2007 P. Herz, Finances and costs of the roman army. In: P. Erdkamp (ed.), A companion to the roman army, Chicester, 2007, 305-322.
- Isac 2001 D. Isac, Viața cotidiană în castrele Daciei Porolissensis. Cluj-Napoca, 2001.

| Kajanto 1965 | I. Kajanto, The Latin Cognomina, Helsinki, 1965. |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Kovacsovics 1987 | W. Kovacsovics, Eine Preisangabe auf einem Sigillatateller aus Salzburg, Germania 65, 1987, 222-225. |
| Kuzmová 2008 | Klára Kuzmová, Terra Sigillata in Barbaricum North of the Pannonian Frontier: Evidence of Long-Distance and Local Trade. In: E. Doksanalt, E. Aslan (eds.), Proceedings of the International Symposium "Trade and Production Through the Ages", 2008, 143-154. |
| Lelekovic 2008 | T. Lelekovic, Relief Terra Sigillata from Cibalae (Vinkovci, borth-eastern Croatia), RCRF Acta, 40, 2008, 179-184. |
| Ludowici 1942 | W. Ludowici, Die Bilderschüsseln der römischen Töpfer von Rheinzabern. Katalog VI meiner Ausgrabungn in Rheinzabern 1901-1914, Darmstadt, 1942. |
| Milnor 2014 | K. Milnor, Graffiti and the literary landscape in Roman Pompeii, Oxford, 2014. |
| Mrozek 1977 | S. Mrozek, Die Goldbergwerke im romischen Dazien. In: H. Temporini, W. Hasse (eds.), Politische Geschichte (Provinzen und Randvolker: Lateinischer Donau-Balkanraum), Berlin 1997, 95-109. |
| Nedelea 2016 | L. Nedelea, Pontic sigillata at Potaissa. New data regarding the import of fine ware in Roman Dacia at castra Legionis V Macedonicae, ActaMN, 53/I, 2016, 185-202. |
| Nedelea 2017 | L. Nedelea, Analiza materialului ceramic. In: S. Nemeti, Irina Nemeti (eds.), Studii asupra graniţelor romane din Dacia. Castrul legionar de la Potaissa. I. Centuriae din praetentura sinistra, Cluj-Napoca, 2017, 83-106. |
| Nedelea 2018 | L. Nedelea, Foculi (fire pots) discovered at the legionary fortress of Potaissa. Case study: centuriae from praetentura sinistra, ActaMN, 55/I, 2018, 117-159. |
| Nedelea 2019 | L. Nedelea, II.1. Ceramica. In: Bărbulescu (ed.), Termele din castrul legionar de la Potaissa, Cluj- Napoca, 2019, 182-248. |
| Nedelea 2020 | L. Nedelea, The Roman Pottery from the legionary fortress at Potaissa, PhD Thesis, Cluj-Napoca, 2020 |

| NT 11 1070 | |
|-------------------------|------------------------------------------------------------------------------------------------------------|
| Noll 1972 | R. Noll, Eine Sigillataschüssel mit Eigentumsvermerk |
| | und Preisangabe aus Flavia Solva, Germania 50, 1972, |
| Que : 1 1000 | 148-152. |
| Opaiț 1980 | A. Opaiț, Considerații preliminare asupra ceramicii |
| | romane timpurii de la Troesmis, Peuce, VIII, 1980, |
| $O_{a} = 1.1 \pm 10.04$ | 328-366. |
| Oswald 1964 | F. Oswald, Index of figure-types on terra sigillata: |
| | ("Samian ware"), Fascicule 2. Annals of archaeology |
| Dobust 2019 | and anthropology. Supplement, London, 1964. |
| Petruț 2018 | D. Petrut, Pottery and military life. Ceramic |
| | assemblages from the barracks of the auxiliary fort at Buciumi, Dacia Porolissensis, Cluj-Napoca, 2018. |
| Pîslaru 2011 | M. Pîslaru, Wasters from Roman pottery workshops |
| 1 ISIAI U 2011 | at Potaissa. In: I. Piso, V. Rusu-Bolindeț, R. Varga, S. |
| | Mustață, E. Beu-Dachin, L. Ruscu, (eds.), Scripta |
| | classica. Radu Ardevan sexagenario dedicata, Cluj- |
| | Napoca, 2011, 167-182. |
| Pîslaru 2014 | M. Pîslaru, The Roman kilns group from Potaissa and |
| 1 10101 0 2011 | its dating, ActaMN, 51/I, 2014, 95-106. |
| Polak 2000 | M. Polak, South Gaulish terra sigillata with potters' |
| 1 01011 2000 | stamps from Vechten, RCRF Acta, Svpplementvm 9, |
| | Netherlands, 2000. |
| Ricken, Thomas | H. Ricken, M. Thomas, Die Dekorationsserien Der |
| 2005 | Rheinzaberner Reliefsigillata. Textband zum Katalog |
| | VI der Ausgrabugngen von Wilhelm Ludowici in |
| | Rheinzabern 1901-1914, Bonn, 2005. |
| Raybould 1999 | M. E. Raybould, A study of inscribed material from |
| - | Roman Britain. An inquiry into some aspects of |
| | literacy in Roman-British society, BAR British Ser. 281, |
| | Oxford, 1999. |
| Roth 1999 | J.P. Roth, The Logistics of the Roman Army at War |
| | (264 B.C A.D. 235), Boston, 1999. |
| Wedenig 2012 | R. Wedenig, Wirtschaftsnotizen auf Instrumentum |
| | domesticum aus Noricum, SEBarc, X, 2012, 101-108. |
| Weiß-König 2010 | S. Weiß-König, Graffiti auf Romischer Gefasskeramik |
| | aus dem bereich der Colonia Ulpia Traiana/Xanten, |
| | Xantener Berichte, Band 17, Mainz Am Rhein, 2010. |













PLIV









