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CONTENTS

STUDIES

ANCIENT HISTORY

Arturo SANCHEZ SANZ

NOMADIC VS. SEDENTARY. GENDER, PRODUCTION AND SOCIAL EVOLUTION IN THE EASTERN EURASIAN STEPPE BETWEEN THE CHALCOLITHIC AND THE BRONZE AGE.....3

Antonio RUIZ SÁNCHEZ, Sebastián URIBE RODRÍGUEZ

THE GIANT'S TRAIL: MOBILITY AND EXCHANGE OF WHALES AND THEIR BY-PRODUCTS IN ANTIQUITY (1ST CENTURY BC-5TH CENTURY AD).....13

Roxana-Gabriela CURCĂ, Lucrețiu MIHAILESCU-BÎRLIBA

WOMEN IN MILITARY DIPLOMAS FROM MOESIA INFERIOR. A PRELIMINARY STUDY.....25

ARCHAEOLOGY

Marius-Mihai CIUȚĂ, Anamaria TUDORIE

NEW DATA ON THE CULTURAL HORIZON OF EARLY NEOLITHIC POLYCHROME POTTERY IN TRANSYLVANIA. THE 432A COMPLEX FROM THE LIMBA-OARDA DE JOS-SITE (ALBA COUNTY).....30

Stanislav GRIGORIEV

THE RELATIONSHIP BETWEEN SOLAR AND VOLCANIC ACTIVITY AND THE CHRONOLOGY OF ARCHAEOLOGICAL CULTURES OF EURASIA IN THE 4TH-1ST MILLENNIA BC.....44

Davut YİĞİTPAŞA, Orhan Alper ŞİRİN

AMISOS ANCIENT CITY EXCAVATION AND POTTERIES.....57

Boaz ZISSU, Amir GANOR, Rina AVNER, Alon KLEIN

ARCHAEOLOGICAL EXPLORATIONS ABOVE AND BELOW GROUND AT HORVAT MIDRAS, JUDEAN FOOTHILLS, ISRAEL....86

Ovidiu ȚENȚEA, Vlad CĂLINA

ROMAN CAMPS IN ROMANIA. THE STATE OF RESEARCH.....127

Vitalie BÂRCĂ, Cristinel FÂNTÂNEANU, Anca MATIȘ, Cristian FLORESCU

ASPECTS OF THE FUNERARY RITE AND RITUAL IN THE SARMATAE CEMETERY OF TIMIȘOARA-HLADIK 1 (TIMIȘ COUNTY). PRELIMINARY OBSERVATIONS166

Albina YERZHANOVA, Gulzada SARGIZOVA, Yeraly AKYMBEK

THE SIGNIFICANCE AND USE OF ANIMAL SCAPULAS IN TALDYSAI SETTLEMENT.....199

ARCHAEOLOGICAL MATERIAL

Bariş GÜR, Sinan MİMAROĞLU

MYCENAEAN FEMALE FIGURINE AND ZOOMORPHIC VESSEL IN THE AYASULUK HILL IN WESTERN ANATOLIA.....204

Yaşar ARLI

PORTRAIT TYPES OF THE EMPERORS OF THE FLAVIAN DYNASTY PRESERVED IN ANATOLIA.....214

Dávid PETRUȚ

CAMP DRESS OR PARADE ARMOUR? AN EQUESTRIAN OFFICER COMMEMORATED ON A FUNERARY RELIEF FROM BRÂNCOVENEȘTI.....224

MATYAS Jozsef

A ROMAN TILE WITH THE PRINT OF A PINCER.....234

ARCHAEOLOGICAL MATERIAL AND REPORTS

Cristinel PLANTOS, Vitalie BÂRCĂ, Cristian Ioan POPA

AT THE BORDER. THE RESCUE ARCHAEOLOGICAL RESEARCH OF CĂMIN (SATU MARE COUNTY).....240

ARCHAEOLOGICAL TOPOGRAPHY

Florin-Gheorghe FODOREAN

MAPS OF ROMAN DACIA. VI. PHILLIPUS CLUVERIUS' MAP 'DACIARUM MOESIARUM ET THRACIAE VETUS ET NOVA DESCRIPTIO' (1629).....337

NUMISMATICS

Gabriel Mircea TALMAȚCHI

ARROWHEADS AND DOLPHINS: PRE-COINAGE MONETARY INSTRUMENTS FROM THE WESTERN BLACK SEA (5TH CENTURY BC).....341

REVIEWS

Roxana-Gabriela CURCĂ

ANNAMÁRIA-IZABELLA PÁZSINT, *PROSOPOGRAPHIA PONTI EUXINI. CALLATIS ET ODESSUS*, CLUJ-NAPOCA, MEGA PUBLISHING HOUSE, 2024, 308 P. ISBN: 978-606-020-707-8. ...348

Csaba SZABÓ

FEDERICA GATTO, FRANÇOISE VAN HAEPEREN (EDS.), *CULTES ET DIVINITÉS DANS LES CARRIÈRES ET LES MINES DE L'EMPIRE ROMAIN*, COLLECTION FERVET OPUS 10, PRESSES UNIVERSITAIRES DE LOUVAIN: LOUVAIN, 2023, 240P. ISBN: 978-2-39061-415-9.....350

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A ROMAN TILE WITH THE PRINT OF A PINCER

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Abstract: This article aims to present an unusual Roman tile, manufactured in the military workshops of the 5th Macedonica legion camp at Potaissa. During the archaeological surveillance work, a tile with the imprint of a Roman pincer was discovered. The real challenge consisted in identifying the shape of the pincer, its classification and typology, as well as the analogies, taking into account the fact that such prints with exact dimensions have not been discovered, only different representations on ceramic vessels, reliefs or paintings, where the shape, the curvature of the handles and that of the jaws are not reproduced faithfully. Most tile prints render fingerprints, paw prints, texts, sketches, or many other things, less tools.

Keywords: *Potaissa, Legionis V Macedonicae, tegulae, brick stamp, pincer.*

In the period 2014–2022, the POR¹ project was carried out, a project to restore and reintroduce the Roman camp of Potaissa into the tourist circuit, and the implementation of such a project on the territory of an archaeological site of category A, of national importance, involved various preventive researches and archaeological surveys.

The Roman fort of the 5th Macedonica Legion on the Cetății Hill plateau in Potaissa², was built after 168 A.D., by the soldiers posted from Troesmis (Moesia Inferior) to Potaissa in the context of the Marcomannic Wars, to strengthen and defend the province of Dacia. From the Roman conquest until that moment, the security of the province was ensured only by the 13th Gemina Legion stationed at Alba Iulia, but it was not enough to ensure the protection of the province of Dacia Porolissensis, being brought a second legion. The Potaissa fort operated here without interruption for more than a century, until the withdrawal of the Roman administration.

In the fall of 2022, when digging the foundation of the future sanitary groups intended for visitors, the works were supervised by archaeologists. The area where this building was placed is in the S-E corner of the legionary fort, more precisely in the *praetentura dextra* of 4.47 ha³, located east of the *via principalis* and in close proximity to the southern enclosure wall⁴. The place was chosen specifically, precisely so as not to superimpose the new

¹ The project “Restoration, enhancement and introduction into the tourist circuit of the V Macedonica Legion Camp, Potaissa-Turda”, financed by: “Regional Operational Program 2014–2020 – Priority Axis 5”, aimed to start intervention and restoration works at the objective of the camp of the legio V Macedonica on the Cetate plateau (Turda, Cluj County). The project carried out between the years 2014–2023 was successfully completed, with restoration and conservation works being carried out at the main objectives of the camp: the principia, the baths, the corner bastion, the decumana gate and the main 4 roads.

² BĂRBULESCU 1987, 98.

³ BĂRBULESCU *et alii* 2019, 13.

⁴ Manuscript Archaeological Surveillance Report V / 2023.

construction on top of an ancient one inside the fort. In this place (Fig.1) a section with an area of 80 square meters was opened, in which no archaeological context or any Roman structure was outlined. In addition to numerous Roman ceramic fragments resulting from the discarded earth, a fragment of Roman tile stamped with the *signaculum* of the *legio V Macedonica* and next to it, the imprint of a tool, what appears to be a Roman pincer was discovered. Initially, the imprint of the pincers was preserved in its entirety, but the fragmentary state of the tile deprives us with this archaeological testimony.

The tile (Fig. 2) is fragmented and has the following dimensions: 24–29 cm long and 18–24 cm wide, respectively a thickness of 3 cm. It has a paste with inclusions of pebbles, brick color (Munsell 5YR 6/8), well burned, specific to this type of *tegulae* discovered at Potaissa. The stamp was applied on the smooth side of the tile being placed approximately in its center, and its position along the length of the tile is approximately 6 cm from the top edge and 11.5 cm from the bottom, and on its width, at 8 cm from the right edge and 6 cm from the left edge. The cartouche has a double border, similar to those of the *tabula ansata* type, and bears the stamp *L(egionis) V(quintae) M(acedonicae)*⁵ with the initials of the legion. The cartridge is 8.7 cm long and 3.2 cm wide and is printed at a depth of 3 mm and the letters are 15–17 mm high and 3–6 mm wide. The cartouche appears to have on the left side, a small triangle-shaped termination, of the *tabula ansata* type, but we are reserved about this, as it could only be an imperfection in the paste of the tegula.

The identified pincer impression is positioned to the right of the stamp, approximately 5 mm below it. The shape of the tool is partially preserved over a length of only 11.8 cm from beak to handle, as a good part of the lower part of the tile is missing, but the pliers were certainly no more than 20 cm long. The maximum opening of the handles when caught with the beak closed is 6 cm. The beak of the pincer is approximately 4 cm in length and the jaws appear to be of different thicknesses: 6 mm on the top and 7 mm on the bottom. The ball joint, or circular part where the two handles are riveted together, appears to be 13 mm in diameter. The handles of the pincer left different traces: the upper one is preserved for a length of 7 cm and a width of 1.5 cm at the base, from where it narrows towards its end to 1 cm. The lower handle is only 6 cm long and 1.4 cm wide at the base, tapering to 1 cm. The imprint on both handles seems to illustrate that the iron handles of the pincer had a rib along their length. The uneven depth resulting from printing is probably due to the stronger pressing on the right side and the fact that the tile is slightly concave near the pincers rivet (Fig. 3), having a maximum depth of 5 mm. This resulted in a deeper print on the beak and lighter on the handles. For this reason, we decided not to reproduce the profile drawing of the tile, because the trace of the handles is barely noticeable.

In antiquity, tongs were a basic and indispensable tool in blacksmith workshops, being usually associated with this activity, and its use has been attested since the 6th century BC. on painted Greek vessels⁶ (Fig. 4). According to Pliny

the Elder⁷, the blacksmith's tools, including the tongs, were invented by Cinyra, the son of Agriopas. In many cases, tongs appear depicted on blacksmiths' funerary tombs and votive monuments, as attributes of the deities Vulcanus and Hephaistos⁸. However, this type of tool was used in several fields⁹, to catch or move objects. The ancient term under which this tool is known is not yet well determined, and in the written ancient sources it is mentioned¹⁰ under three similar forms: *forceps*, *forpex* and *forfex*. Rupnik¹¹ mentions a first classification of them that appears for the first time in Isidor¹², who associates the term with the artisan or craftsman, thus: the *forceps* is used by the blacksmith, the *forpex* by the barber, and the *forfex* attributed to the tailor. The difference between the tools is their utility: with pincers, which resemble a modern plier, you can perform precision work, while with tongs you grab objects to move them from one place to another.

Currently, in the specialized literature there are two classifications of pincers¹³: the first is the one made by Gaitzsch¹⁴ (Fig. 5), who identifies three types of pincers based on the shape of the jaws, and the second, that of J.P. Guillaumet¹⁵, who is classified according to the shape of the jaws but also according to their dimensions (Fig. 6). There is also a classification according to the ratio¹⁶ between the handles and the dimensions of the jaws. According to this classification, the large pincers have a ratio of 1:3.5, and the smaller ones have a ratio of 1:2–1:2.5. Some models of pincers, especially those used by blacksmiths, were provided at the end of one of the handles with a clip to secure the handles.

The origin of this pincer is clear and cannot be questioned, as it is printed on a Roman tile alongside the legion stamp. Its dating is equally clear, based on the typology of the stamps used by the 5th Macedonica Legion at Potaissa, being a wellknown type of stamp (Fig. 8). It is Type T VI.20=B VI.52 (Type VI LVM/52)¹⁷ (Potaissa type) dated in the 2nd–3rd century AD, so the pincer can also be dated to the 2nd century AD.

The real challenge consisted in identifying the shape of the pincer, its classification and typology, as well as the analogies, taking into account the fact that such prints with exact dimensions have not been discovered, only different representations on ceramic vessels, reliefs or paintings, where the shape, the curvature of the handles and that of the jaws are not reproduced faithfully. Most tile prints render fingerprints, paw prints, texts, sketches, or many other things, less tools. Another challenge was transposition the pincers onto paper and drawing it from the print. We had some reservations about this print, and assumed that it could also be a more deformed miliaria mark, made by the potters with

⁷ PLINY 7.57.16.

⁸ PLEINER 2006, 81, Fig. 29, 1–3. The pliers in pictures 1 and 3 are similar in shape, but they are typical for blacksmith shops; GAITZSCH 1980, 220.

⁹ DUVAUCHELLE 2005, 22.

¹⁰ GAITZSCH 1980, 220.

¹¹ RUPNIK 2014, 21.

¹² ISIDOR 20.13.3.

¹³ DOUVACHELLE 2005, 22–24.

¹⁴ GAITZSCH 1980, 227, Fig. 40.

¹⁵ GUILLAUMET 1998, 5, Tab. I.

¹⁶ PIETSCH 1983, 54.

¹⁷ NEMETI 2019, 135, Fig. 310/20; NEMETI 2022, 137, Pl. IX./ T VI.20=B VI.52.

⁵ NEMETI 2022, 145, Pl. III/1. This type is identical to those in the old collection of the Turda History Museum.

⁶ TYLECOTE 1976, 53, Fig. 34.

their fingers in the soft paste of the tile, but a closer analysis of the print under the microscope ruled out this possibility (Fig. 7). The straight and parallel mark near the beak could not be made with such precision with the finger, moreover, the mark of the socket of the jaws is clearly distinguishable from the marks left by the arms of the pincers. Pincers are usually classified according to their size, shape, and jaws' clamping system, which also suggests their utility.

In the present case, its usefulness is easy to imagine, if we take into account its smaller dimensions, ideal for precision operations. We can exclude from the beginning its use in metallurgy, due to the parallel and elongated jaws at the front, with a rectangular socket at the end. This type of pliers was preferred by carpenters who used them to extract nails from wooden objects, but it was used on a much larger scale in various fields. The elongated beak with its almost parallel jaws exerted pressure in their end on a surface of about 1.5 cm long, which classifies it in the typology of precision pincers with used to grasp various things.

This type of ancient pliers was also used by other populations, having analogues not only in the Roman world. Pliers similar in shape¹⁸ and utility were used, for example, in Dacian blacksmith workshops. The only discrepancy is its dimensions. A similar jeweler's pincer¹⁹ (MNIT V 18176), of small size, with short and curved jaws, widened in the area of the rivet, was discovered in Grădiștea Muncelului, dated to the 1st century BC – AD. After classifying the tongs used by the Dacians, we distinguish two similar types, with analogies in the Celtic world, but none of them fit perfectly into the typology. Type II²⁰ has long, straight jaws with very long, parallel handles that limit the opening of the handles. Type IV²¹ characterized by short and straight jaws, slightly widened near the rivet, have a jaw-handle ratio of approximately 1:3.5, so much larger, but their angle is similar to our Roman pincers. This type has two variants, the short one about 30 cm long and the much larger one, but neither has analogies in the Celtic or Roman world.

In conclusion, the print on the tile discovered in Potaissa seems to be the trace left by a pair of pliers, and based on the classifications and typologies in the specialized literature, this type of pincer was a favorite model of several craftsmen and artisans, precisely for its small size and short tipped jaws, which made it very adaptable for various precision operations. According to the table made by Guillaumet, our pincer fit into the category preferred by tanners, and according to Geitzsch's typology, it corresponds to type A with straight and forward jaws, the model preferred by most craftsmen. Both classifications confirm, however, that it is a typical Roman pincer.

On the other hand, the placement of the pincer in the middle of the tile, close to the stamp of the 5th Macedonica Legion, attests to the fact that this print was made intentionally by a Roman soldier, either for pure fun in the absence and careful supervision of an *immunis*²², either out of a desire

to willfully immortalize a basic tool used daily by him. Most likely, the soldier in question was in charge of repairing or making new wooden molds for forming the tiles, and the pincers were used to remove and reuse old nails from old and worn borders.

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¹⁸ BORANGIC/BĂDESCU 2017, 74, nr. 64.

¹⁹ GLODARIU/IAROSLAVSCHI 1979, 101, Fig. 55/2.

²⁰ GLODARIU/IAROSLAVSCHI 1979, 49, Fig. 13/5.

²¹ GLODARIU/IAROSLAVSCHI 1979, 49, Fig. 14/2.

²² HUMPREYS 2018, 155. In the *fabricae* (workshops) of blacksmiths in the Roman camps, common soldiers worked under the careful supervision

of the *immunnes*, soldiers who knew the craft and were more privileged, exempt from some military duties. It is possible that the same practice was used in the pottery workshops belonging to the *Legio V Macedonica*.

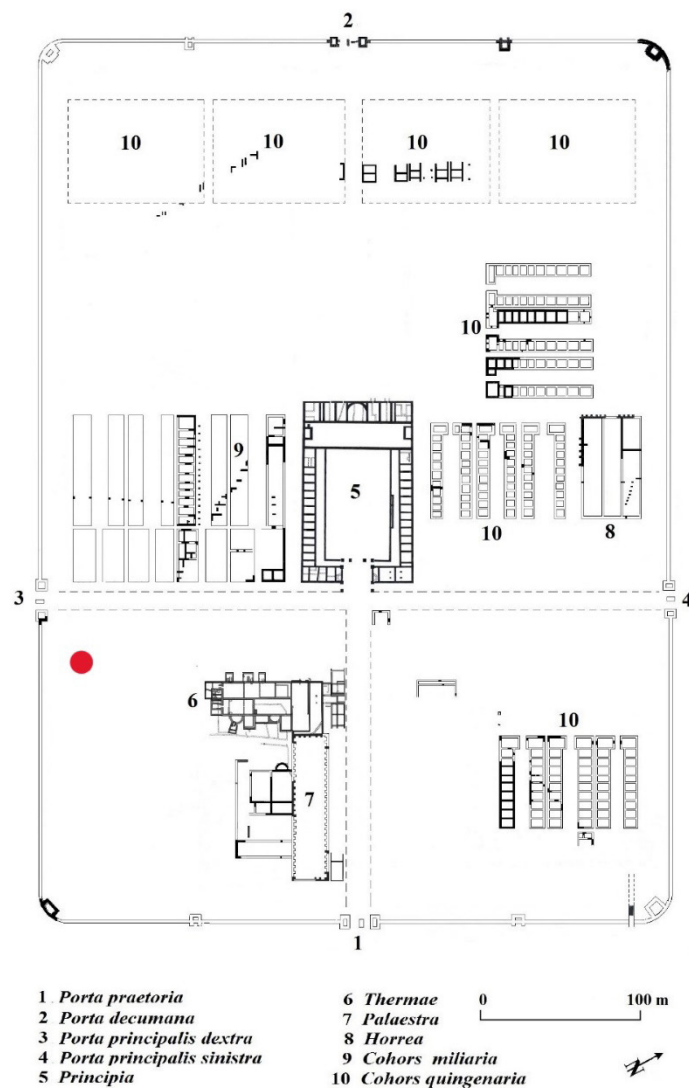


Fig.1. The plan of the legionary Roman camp from Potaissa and the surveys point (after BĂRBULESCU 2019, 14, Fig. 2).



Fig. 2. Tile with the imprinted pincer and CorelDraw drawing.



Fig. 3. Image with the concave side of the tile.



Fig. 4. Painted greek vessel from 6th century BC (after TYLECOTE 1976, 53, Fig. 34.).

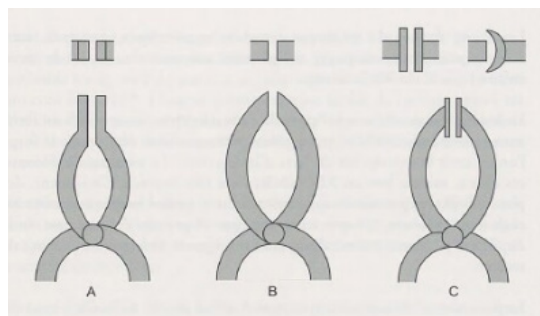


Fig. 5. The typology of pincers by the shape of the jaws (after GAITZSCH 1980, 227, fig. 40).

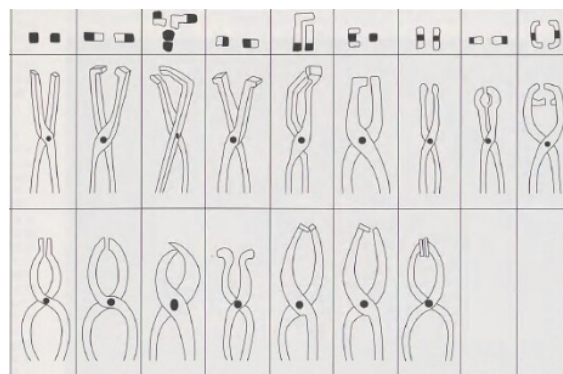


Fig. 6. The typology of tongs based on the shape of jaws and handles (after GUILLAUMET 1998, 5, tab. I.).



Fig. 7. The print of the pincers jaws.



Figure 8. The VI/20 type stamp of *Legio V Macedonica*.