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Piotra Dyczka

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Ośrodek Badań nad Antykiem Europy
Południowo-Wschodniej
00–927 Warszawa
ul. Krakowskie Przedmieście 32
novae@uw.edu.pl

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Wydawnictwa Uniwersytetu Warszawskiego
02-678 Warszawa, ul. Smyczkowa 5/7
www.wuw.pl; e-mail wuw@uw.edu.pl
Dział Handlowy: tel. (48 22) 55-31-333
e-mail: dz.handlowy@uw.edu.pl

Skład i łamanie: Dariusz Górski

Druk i oprawa: POZKAL

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Renata Ciołek

FINDS OF PROVINCIAL ROMAN COINAGE IN NOVAE¹

Abstract: The article concerns finds of Roman provincial coins from the excavations of a legionary army camp carried out in Novae (Bulgaria) by the Antiquity of Southeastern Europe Research Center of the University of Warsaw. Current research is based on a set of close to 200 provincial coins from 60 years of excavations (between 1960 and 2022) in two areas of the site, the army hospital (so-called Sector IV) and the barracks of the first cohorts in Sector XII. The results have by and large confirmed findings made earlier, concerning monetary circulation in the army camps on the Lower Danube, but have added information about the proportions of coinage coming from the two main minting centers from this period, Nicopolis ad Istrum and Marcianopolis, which were working from the early third century CE through the reign of Gordian III. It turns out that there is much less quantitative difference between them (a tabular presentation of the finds is included to underscore the results) and that the role of the Marcianopolis mint was greater than previously thought, a fact that was not so clear before. The growing importance of Marcianopolis coinage is attested by their number matching that of strictly Roman coins. Moreover, a coin from Ephesus proved very interesting and rare in this Danubian assemblage.

Keywords: Novae, provincial minting, Moesia, Nicopolis ad Istrum, Marcianopolis, Roman minting

The administrative incorporation of the territories of Moesia and Thrace (modern Bulgaria, eastern Greece and northwestern Turkey) into the Roman Empire² made the region part of the huge and complex economic machinery of the Roman state, including a developed monetary system. The process was not hurried, with the Romans gradually integrating all the territories also economically. Even so, from an economic point of view the large and highly differentiated entity that was the Empire was governed throughout by a single economic factor, namely coinage issued according to the same strict standards enforced all over the Roman world. Over the years various more or less revolutionary transformations, both official and “behind the scenes”, were introduced gradually and in more or less the same form in all the territories throughout the Empire, but one aspect never changed: the monetary economy remained, intrinsically and consistently, in Rome’s hands.³

¹ Study co-financed from the state budget under the program of the Minister of Education and Science (Poland) entitled “Science for Society”, project no. NdS/549 035/2022/2022, co-financing amount 1,295,867 PLN, total value of the project 1,295,867.00 PLN.

² GEROV 1983.

³ See BOTEVA-BOJANOVA 1997, *passim*.

Moesia was a strategic region for Rome.⁴ From four to five Roman legions were stationed in this short section of the Danubian limes.⁵ One of them, the legio VIII Augusta, put up the first fortifications at Novae more or less in the mid-first century CE,⁶ and in 69 CE was replaced there by legio I Italica.⁷ Coinage then in circulation flooded into the region which had only recently been included in the fold, in the times of the emperor Claudius.⁸ The system at the time was not quite unified yet, with each province showing individual characteristics. The pool of coins found at Novae during 63 years of excavations reveals many regularities that are an indication of how the region of Moesia was treated from the time of its integration into the complex Roman economic system.⁹ Demand for “Roman” coinage snowballed at the time, triggered by the intensive building programs initiated in the new provinces, in Moesia and elsewhere, including, for example, road-building, that have had an impact on this territory ever since.

In 86, Moesia was divided into two provinces.¹⁰ Novae found itself in Moesia Inferior (Lower) and from this time until the end of the second century CE the monetary circulation system in this territory closely reflected the Roman system. After that there was more diversification in different parts of the Roman state. Central-issue “bronze” coinage (from the mint of Rome) continued to dominate for a long time still, but started to be supplemented with coins struck locally ever since the reign of Septimius Severus. The snowballing production of “bronzes” in local minting centers swamped the market practically everywhere where supplies from the central mint in Rome did not meet the demand in the first half of the third century CE.¹¹ It was a period of general unrest, both internally and externally, with an economic crisis undercutting the stability of the Empire as a whole and barbarian raids crossing the border at will.¹² One effect was hoarding property on a mass scale, which is manifested in the archaeological record mainly by hoards of coins and valuables, for which those hiding them never returned for a variety of reasons.¹³ These hoards have greatly contributed to a reconstruction of the monetary circulation system in Moesia. The provincial coinage, specific to each province in the Roman Empire, played a crucial role in the imperial monetary system, filling the local market demand for coins and covering soldierly payments. Provincial mints were very sensitive to political and military events. They were part of the imperial monetary system but at the same time reflected the identities of the local peoples living in the provinces.

Provincial coinage is clearly distinguished in the pool of coins coming from the excavated parts of the Novae fortress.¹⁴ It is a veritable “brand” in Moesian territory.¹⁵ In statistical terms, this coinage supersedes in importance central Roman issues from the time of Commodus, reaching an absolute superiority in numbers in the 210s and 220s (see Table 1).

The new pool of provincial coins from sector XII at Novae has shed even more light on monetary circulation of the first half of the third century CE.¹⁶ These changes are subtle and yet significant. Together with finds from the previously excavated sector IV of the army camp at Novae, it clearly illustrates the production peak of the Moesian and Thracian mints supplying Novae with “bronze” coinage at this time.¹⁷ To date, 197 provincial coins have been recorded

⁴ POPOVIĆ 1995; MIRKOVIC 2008, with further references.

⁵ WHATELY 2016, *passim*.

⁶ MIRKOVIĆ 1998, pp. 89–98; DYCZEK 2019a, pp. 55–64.

⁷ WHATELY 2016, pp. 12–19.

⁸ CIOLEK 2020 [2023].

⁹ DIMITROV 2011; CIOLEK, DYCZEK 2011.

¹⁰ POPOVIĆ 1995.

¹¹ GUSHTERAKLIEV 2002, pp. 123–25.

¹² See GEROV 1952/53, pp. 26–29.

¹³ BOLIN 1958, pp. 52–65, 178, 179.

¹⁴ P. DYCZEK, “Forty Years of Excavations at Novae”, *Novensia* 14, 2003, pp. 7–20; P. DYCZEK (ed.), *Novae. Legionary Fortress and Late Antique Town*, vol. I, Warszawa 2008; P. DYCZEK, *The Lower Danube Limes in Bulgaria*, Warszawa–Vienna 2008, pp. 65–78; DYCZEK 2015, pp. 169–177; DYCZEK 2018, pp. 39–80; LEMKE 2018, pp. 74–82; DYCZEK 2019b, pp. 115–126.

¹⁵ CIOLEK 2022, pp. 51–84.

¹⁶ CIOLEK 2019, pp. 79–99.

¹⁷ CIOLEK 2022, pp. 51–84.

Table 1. Provincial minting: finds of coins from Novae sectors IV and XII (left and right side of the column, respectively) presented by mints¹⁸

Emitent	MINTS												Total								
	Vimina-cium	Nikopolis	Hadri-anopolis	Anchialos	Martia nopolis	Perinthos	Dionysopolis	Tomis	Pergamon	Nicaea/Deultum	Amastris / Laodicea / Ephesus	Unidentified									
Domitian						1							1								
Marcus Aurelius			2										2								
Commodus									1	1			2								
Amastris											1		1								
Septimius S.		6	15	1	2	21						3	1	49							
Geta			3				1					1		5							
Caracalla		3	10	1	4	2	4					1	1	2	28						
Macrinus		2	4												6						
Elagabal		2	6			2	7								21						
Diadumenian			6			2				1		1E	1	2	9						
Alexander S.			1			5		1		1			1		9						
Maximinus Thrax											1		1		2						
Gordian III	2	4	2	3	1	2	4			1			1		21						
Phillip I															0						
Herenia Et.	1														1						
Trebonian Gallus	1														1						
Trajan Decius															0						
Volusianus	1														1						
Unidentified													25	13	38						
SUM															197						
TOTAL	3	2	13	49	2	6	2	6	43	1	1	1	1	3	2	1	2	34	18	68	127

¹⁸ Only coins discovered at Novae by the expedition from the Antiquities of Southeastern Europe Research Center of the University of Warsaw in 1960–2022.

from the site, with the new sector yielding 100% more provincial coins compared to the number of finds from the army hospital (*valetudinarium*).¹⁹ After ten years of research in the new sector, this coinage group constitutes 65% of all of the coin finds from the two sectors taken together (sectors IV and XII). Intensive minting of provincial “bronzes” started in the times of Septimius Severus and lasted through the end of the reign of Gordian III. The coins of Septimius Severus are the most numerous, but those of other rulers are not significantly less in number. Coins of short-lived emperors like Macrinus (217–218)²⁰ or Diadumenianos²¹ are just as numerous.

The Nikopolis ad Istrum mint is the most extensively represented provincial mint among the finds from Novae.²² This situation appears to be constant and there is no indication that things will change with the coming of new finds, considering that sector XII has added a huge number of coins from this mint. At present there are 62 coins constituting 32% of the total of 197 recorded provincial “bronzes”. One is also entitled to assume that most of the unidentified provincial coins (see Table 1) also came from this mint. Thus, it is reasonable to say that at least half of the coins in circulation in the army camps on the Lower Danube came from Nicopolis ad Istrum.

The town of Nicopolis ad Istrum, established by Trajan,²³ also abounded in provincial coinage,²⁴ although the coin pool from the site demonstrates considerable variety:²⁵ not only coins from the local mint, which is to be expected considering the extent of this mint’s production, but also other mints, e.g., Marcianopolis, Phillipopolis, Anchialos, Hadrianopolis, Deultum, all of which are represented in the hoards discovered at Hotnitsa, Phelishite, Rodina, Suhindol, Gorna Rositsa and Lyaskovets. The hoards also show that the mints of Tomis, Odessus, Mesembria and Bizye, none of which have yet appeared among the finds from Novae, were also represented in Nicopolis.

What then are the “subtle” changes hinted at earlier? The new finds suggest that Marcianopolis was just as active in supplying the army camps on the Lower Danube with coins from its mint (see Table 1).²⁶ The city, which peaked in prosperity in the times of the Severan emperors (clearly indicated in Table 1), was very important for the province. Two hoards from this time were discovered within the city and six more outside of it.²⁷ Of the pool of coins found at Novae to date, 49 (that is, 25%) were issued by the Marcianopolis mint and 88% of this number come from the recent excavations. In other words, the results from Sector XII show a rising trend for the coinage of Marcianopolis (see Fig. 1, Fig. 2).

The ratio of coins from the two mints is currently 32% to 25%, highlighting the substantial position of the second of the two mints in the Lower Danubian economy of the first half of the third century CE. The same statistic for the finds from the army hospital was 20% to 9% in favor of the Nicopolis ad Istrum mint. In light of the new finds, the position of Marcianopolis has started to look better. The number of coins from this mint has grown by 88%.

The Hadrianopolis mint²⁸ is represented by eight coins (4%) and it appears that it was not very common on the Lower Danube. The other mints are present in either one or two examples with the exception of Viminacium,²⁹ which is represented by five coins (see Fig. 3), dating from Gordian III to Volusian,³⁰ making the latter the youngest provincial coins discovered at Novae. When Viminacium was producing its coins for circulation on the Lower Danube, the other provincial mints were no longer operational. As a matter of fact, when the Viminacium mint

¹⁹ CIOLEK, DYCZEK 2011.

²⁰ BOTEVA 1995, *passim*.

²¹ Cf. BOTEVA-BOJANOVA 1997, *passim*.

²² IVANOV 1983; POULTNER 1995; IVANOV 2012; TOPALILOV 2005, pp. 251–262.

²³ See TOPALILOV 2005, with further references.

²⁴ VLADKOVA 2020.

²⁵ MINKOVA 2002, pp. 128–131.

²⁶ GEROV 1975, pp. 49–72.

²⁷ KOWALCZYK-MIZERAKOWSKA (2025, in print).

²⁸ JURUKOVA 1987; VARBANOV 2002

²⁹ KOS 1992.

³⁰ AMNG, vol. I, pp. 21–80.

³¹ SPASIĆ-ĐURIĆ 2002 (with further references).



Fig. 1. Bronze coin of Caracalla from Martianopolis (Inv. no. 22/22) discovered at Novae, reference: *AMNG* I 688–689, see VARBANOV 1050 (photo: Krzysztof Narloch).



Fig. 2. Bronze coin of Gordian III from Viminacium, Upper Moesia (Inv. no. 67/22) discovered at Novae, reference: VARBANOV 115 (photo: Krzysztof Narloch).

started making coins, which was in 239–255 CE,³¹ the Thracian and Moesian operations had already ceased.³²

Other mints that issued their coins for circulation in Lower Moesia in the first half of the third century CE included Anchialos (8 coins, 4%), Dionysopolis and Deultum (two coins each)

³² See G. ORLOV, *Viminacium: Emisije lokalnog novaca*, Belgrade–Požarevac 1970; F. MARTIN, “A viminaciumi tartományi veretoveinek pozíciója”, *Numizmatikai*

Közlöny 1991–1992, pp. 214–217; P. Kos, “The Provincia Moesia Superior in Viminacium”, *Zeitschrift für Papyrologie und Epigraphik* (Bonn) 1992, pp. 209–214.



Fig. 3. Bronze coin of Septimius Severus from Martianopolis (Inv. no. 23/22) discovered at Novae, reference: *AMNG* I 571-2 (photo: Krzysztof Narloch).



Fig. 4. Bronze coin of Elagabalus (Inv. no. 55/22) discovered at Novae (photo: Krzysztof Narloch).

and Tomis, Nocaei, Amastris, Laodicea (one coin each). A recent find proved to be a highly interesting example of a coin from Ephesos (inv. no. 55/22, see Fig. 4), struck for Elagabalus and dated to his reign in general, that is, 218–222 CE. It bears the image of a speared boar and the legend $\Theta\Phi\epsilon\kappa\kappa\iota-\Omega\text{N}$, which should actually read $\Theta\Phi\epsilon\kappa\kappa\iota-\Omega\text{N}$, because the coin was struck twice doubling in effect the letter C.³³

The superior numbers of coins from Nicopolis ad Istrum and Marcianopolis is not surprising in view of their proximity to the army camp at Novae. It is only natural that their issues flooded the market at Novae. The Nicopolis mint during its short operational life produced a great

³³ SNG COP 452. Coin identified by Tomasz Więcek. ³⁴ TOPALILIOV 2005, pp. 242–250.

number of coins,³⁴ especially in the rule of the Severan emperors: Septimius Severus, Caracalla and Geta, and Elagabalus, when the mint at Rome was unable to meet the demand for bronze coinage with its own issues. The number of mints producing their own coinage throughout the Roman Empire in the reign of Septimius Severus rose to a record high of 365.³⁵

A hoard of 46 provincial coins found a few years ago and published elsewhere³⁶ consisted for the most part of coins from the two most important Moesian mints but in a reverse proportion with 22 issues from Marcianopolis (48%) to 17 from Nicopolis ad Istrum (37%).³⁷ The hoard also included two coins each from Anchialos and Hadrianopolis and one coin each from Deultum and Dionysopolis. Interestingly, another bronze from Deultum (no other issues from this mint are known from Novae) was discovered in Sector XII near the find location of a second hoard deposited in the reign of Gordian III (238–244). In this case, too, the largest number of coins was struck for Septimius Severus (30 in all; 67%) and of these almost 40% were from Marcianopolis. The most active mint at Nicopolis ad Istrum in this case had a lesser share of just 12 coins (25%).

The mints in question were extremely sensitive to the political events taking place in the province. For instance, Elagabalus' tour of Moesia in 218 CE was marked by a relatively high number of "bronzes" from the two most important Moesian mints. The same can be said of the coins of Gordian III³⁸ as evidenced in the coin assemblage from the two excavated sectors of the army camp. In the latter case, the abundance of coinage may correspond to troops crossing the Balkans on their way to the East in 241 CE. The decline of most of the Thracian and Moesian mints in this period is also correlated with political events and linked to the specificity of the monetary system in the second half of the third century CE, namely, the rapid and definite devaluation of the silver antoninianus which made the production of "bronze" coinage hardly remunerative. For this reason, coin finds from the second half of the third century CE from the two excavated sectors consist of nothing but extremely devaluated antoniniani.³⁹

Finds of coins from Novae from the first half of the third century CE (see Table 2) show that the demand was met at this time solely by the nearby Moesian mints of Nicopolis ad Istrum and Marcianopolis. Even keeping in mind that the research assemblage of coins is only a small part of the "living culture", it is still beyond all doubt that coins from Nicopolis ad Istrum, followed closely by Marcianopolis, dominated the market in the army camp. The coinage that reached Novae represented what was currently in circulation in the region. This is demonstrated very well by the makeup of coin hoards from both the cities with mints, which contained examples of coins from the same mints that are represented at Novae as indicated by an analysis of coin hoards from the first half of the third century CE.⁴⁰ In this period soldiers were paid exclusively with provincial "bronzes", especially as it was a time of intensive warfare generating an excessive demand for coinage. One should keep in mind that the state treasury did not hold enough silver, whereas Septimius Severus was faced with a long and bitter battle with four other pretenders to the imperial throne. He was victorious only thanks to his 15 legions, including the legio I Italica stationed at Novae.⁴¹ The deepening crisis resulted in progressive changes in the monetary system, which resulted in turn in the growing importance of provincial minting. Three dating "horizons" have been observed for hoards from this period: the reign of Caracalla (198–217), then of Alexander

³⁵ BURSCHE 1992, p. 234, note 29.

³⁶ CIOLEK 2019, pp. 79–98.

³⁷ CIOLEK 2019, pp. 79–98. Pl. 5.

³⁸ MINKOVA 2002, p. 128–131.

³⁹ The original name of the new silver denomination unit is not known. The *argenteus antoninianus* is first attested in the times of Aurelian in the *Scriptores Historiae Augustae* (SHA 15,8); see W. KUBITSCHKE, "Antonini-

anus", [in:] *Paulys Real-Encyclopädie der Classischen Altertumswissenschaft* 1893, cols 2568–2571.

⁴⁰ The results of this research, along with a catalogue of finds from this period, will be published in a monograph *Coinage of the Roman provinces of Moesia and Thrace. Imperial or provincial?* (publishing date 2025).

⁴¹ CIOLEK, KOLENDO 2009, pp. 225–235.

Table. 2. Finds of Roman coins from Novae legionary fortress sectors IV and XII (left and right side of the column, respectively) corresponding to the functioning of provincial mints

Issuer	Sester-tius	Dupon-dius	As	AE uniden-tified	Provin-cial	Dena-rius	Subae-ratus	Total	F ^{e/r}
Septimius Sever					10 6	4 1		21	1.16
Geta	1			1	2 3	1		8	8
Caracalla					6 10	1 1	2	20	3.33
Makrinus					2 3			5	14
Diadumenian					9			9	
Elagabal					6 13			19	4.75
Alexander Severus					2 5	3 2	3	15	1.15
Suma	1			1	28 49	9 4	5	97	2.31
Issuer	Sester-tius	Dupon-dius	As	AE uniden-tified	Provin-cial	Antoninianus			F ^{e/r}
Maximinus Thrax					1			1	0.25
Gordian III					8 11		1 1	21	3.5
Phillip I	1				1		2 2	6	1.2
Trebonian Gallus					1		1	2	1
Trajan Decius					1	1	1	3	1
Volusianus					1		2	3	1.5
Valerian I						2	1	3	0.43
Gallienus						17	36	53	3.53
Claudius II						11	22	33	16.5
Aurelian						27	50	77	15.4
Tacitus							7	7	7
Probus						18	23	41	6.84
Carus						3	1	4	4
Cariunus						2	3	5	2.5
Diocletian						3	6	9	2.90
Maximi-anusHerkulius						1		1	
Galerius Maximianus							6	6	
Unidentified	1					13	10	24	
Total	1 1				12 12	101	172	299	4.27

Severus (222–235) and finally Gordian III (238–244). Yet the greatest number of hoards comes from the period of the most intensive barbarian raids during the reign of Phillip I (244–249) through that of Trajan Decius (245–251).⁴² These hoards also contained many provincial coins, which had clearly ceased to be issued for the most part by the reign of Gordian III.

Abbreviations

<i>AMNG</i>	<i>Die antiken Münzen Nord-Griechenlands</i> , ed. F. IMHOOF-BLUMER, Berlin, 1898–1913: vol. I : Dacia and Moesia.
<i>SNG Cop</i>	<i>Sylloge Nummorum Graecorum. The Royal Collection of coins and medals</i> , Danish National Museum, Copenhagen 1942–

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⁴² BOŽKOVA 1998, pp. 139–143.

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Renata Ciolek
 Faculty of Archaeology
 University of Warsaw
 renataciolek@uw.edu.pl
 orcid.org/0000-0002-1001-0726

Michał Duch

LEGI[ITAL] AND FAVS ON A ROOF TILE FROM THE LEGIONARY CAMP AT NOVAE (LOWER MOESIA)

Abstract: A roof tile, no. 20-23c (Fig. 1), was documented in Sector XII at Novae (Fig. 2). On its surface, it featured two stamp impressions: that of the Italian Legion (LEGI[ITAL]) and the name FAVS, denoting a supervisor at the brickyard. This is the first discovery of the kind at Novae. Analogous items have been previously found in Oescus. This warrants the conclusion that during the preparations for Trajan's war against the Dacians a central brick-making facility functioned there to supply the legionary camps at Novae and Oescus, where at least five teams were employed.¹

Keywords: Novae, Oescus, legio I Italica, brick stamps, bricks, tiles, brickyard, Trajan, Dacian war, epigraphy, logistics

Next to fragments of stoneware vessels, stamped building ceramics represents the most commonly discovered type of artefact in the Danubian fortress of Novae, which is due to the widespread use of bricks and tiles in legionary construction. Legio I Italica, the unit based there, usually marked their wares with a simple stamp containing its abbreviated name, e.g. LEGIITAL, LEGITALI, etc.² Indeed, more than 90% of the stamped building ceramics discovered at Novae since 1960 by all Bulgarian and Polish archaeological expeditions bears the stamp of that very legion.³ For instance, of the 993 stamped bricks and roof tiles found in Sector XII between 2011 and 2024, 932 (94%) featured the stamp of legio I Italica, while only 61 (6%) were marked differently. In the latter group of finds, there are stamps of legio XI Claudia, legio I Minerva,⁴ names (e.g. MARC), *tria nomina* (C. ATON. M)⁵ or single letter sequences (PCP; QCO).⁶ Roof tiles and bricks with more than one stamp imprint are even rarer. Even so, those documented to date had the same stamp on the surface,⁷ and it was only at the late Roman fort at Iatrus (Krivina), a few kilometers east, that a tile with four different variant stamps of legio I Italica has been discovered.⁸ However, until now, no tile or brick originating from Novae itself has been found to be marked with two completely different stamps, likely due to the fact that most are discovered in fragments. Based

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² To date, three typologies of building ceramics from Novae have been developed: SARNOWSKI 1983; GUDEA 2003; MATUSZEWSKA 2006.

³ On the history of archaeological research at Novae see DYCZEK 2008, pp. 31–70.

⁴ SARNOWSKI 1987, pp. 107–122; DUCH 2019, pp. 7–19.

⁵ SARNOWSKI 1983, p. 41, Fig. 18; MATUSZEWSKA 2006, p. 60, Pl. XII; ŻELAZOWSKI 2015, pp. 249–256.

⁶ DUCH 2017, p. 114.

⁷ SARNOWSKI 1983, p. 32, Fig. 16; Inv. no. 24-12c; 41-13c; 143-13c; 42-16c; 75-16c; 31-17c; 25-18c; 03-22c; 20-23c.

⁸ SARNOWSKI 1983, pp. 32–33.



Fig. 1. Roof tile with impressions “LEGIT” and “FAVS” (20-23c) (photo and drawing M. Duch).

on analogous discoveries from Oescus⁹ (Fig. 3), it may be legitimately assumed that the fragments of roof tiles with MAX and VETIA¹⁰ imprints from Novae would additionally contain the LEGIT[ITAL] imprint, if preserved in their entirety. The specimen discussed in this paper—20-23c (Fig. 1)—is the first of its kind to have survived in such a state; moreover, besides the LEGIT[ITAL] imprint it features a previously unknown inscription, namely FAVS. This presents an excellent opportunity to publish a new type of stamp from Novae and a double-stamped tile, as well as recapitulate the most relevant historiographical views on such artefacts, highlighting their role in the research concerned with Novae.

In 2011, archaeological investigations were launched in Sector XII, located east of the principia on the *via principalis*. There, legionary barracks, *tabernae* and a stately building designated as the Peristyle House or “Centurion’s House” were discovered.¹¹ The tile fragment 20-23c (Fig. 1) was found in the debris layers in the south-western part of the latter structure (Fig. 2). Also, an interesting food cistern cooled by a lead pipe was identified at a lower stratigraphic level in the same location. Archaeological data only allow a broad determination of when tile 20-23c was manufactured, i.e. from the early second century to the early third century. However, the stamp of legio I Italica on the surface of the tile makes it possible to narrow down the dating, as will be discussed below.

Tile, inventory no.: 20-23c (Fig. 1);

Dimensions: 0.24 x 0.145 x 0.029 cm;

Sector XII; Hectare XVIII; Square 205; South 0.28; East 3.43; Depth 48.28 m.a.s.l.

LEGIT[ITAL] stamp dimensions: 0.07 × 0.036 cm;

FAVS stamp dimensions: 0.069 × 0.03 cm.

⁹ IVANOV 1981, pp. 42–48; IVANOV 2002, p. 17, Fig. 5.

¹¹ DYCZEK 2018, pp. 27–71.

¹⁰ SARNOWSKI 1983, p. 39, Pl. VII, Type XXIII,1; DUCH 2019, p. 112, Fig. 14.



Fig. 2. Plan of section XII of Novae showing the location of the 20-23c tile discovery (prepared by B. Wojciechowski)

The artifact in question has been preserved fragmentarily, but in sufficient condition to identify similarities with analogous finds from Oescus (Fig. 3), where next to an identical stamp of the legion one finds the following names: FIR(mus), MAX(imus), PROCV(lus) and VETIA(nus).¹² Also, the FAVS stamp was applied close to one edge of the tile, while the mark of the legion was placed in the centre. The repetition of the pattern suggests the existence of specific stamping rules at the brickyard. As noted in the introduction, this is the first tile discovered in Novae with two different stamps on its surface. To date, nine roof tiles with multiple imprints of the same stamp

¹² IVANOV 1981, pp. 42–48; AE 1985, 0736; IVANOV 2002, p. 17, Fig. 5: The tiles were discovered as having been secondarily used in the construction of a burial chamber

in the eastern necropolis of Oescus, and were discovered together with the legio XI Claudia tiles.

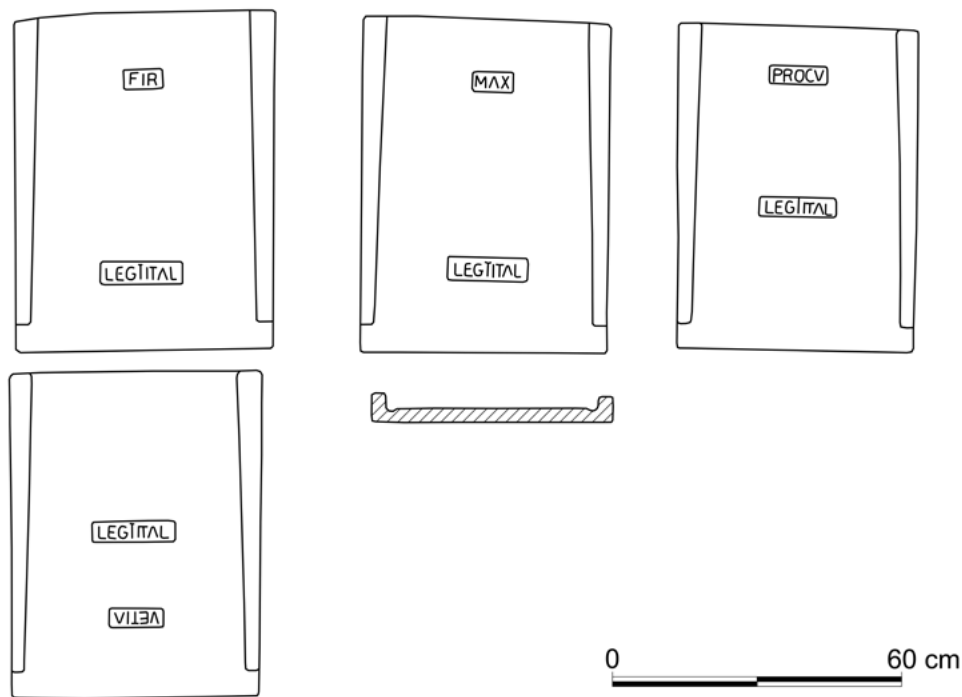


Fig. 3. Roof tiles from Oescus with stamps impressions LEGIITAL with FIR, MAX, PROCV, VETIA (IVANOV 2002, p. 17, Fig. 5).

have been documented in Sector XII at Novae; eight bore stamps of legio I Italica (Fig. 4) and one was marked by legio I Minerva (Fig. 5). In this group, the particularly interesting tile was stamped four times with LEGIITA but it also shows imprints of a left and right military boot (*caliga*), the likely result of soldiers playing in the brickyard (Fig. 6).

The preserved LEGI[ITAL] imprint (Fig. 1) does not possess any distinctive features, belonging to one of the most widespread types in Novae: a simple text placed in a rectangular frame without any ornamentation. The first three letters are visible: LEG and the number I. Letters G and L are smaller than E. G has a rounded body (so-called bowl). Its stem curls upwards and is not aligned vertically with its upper cap. All letters and the numeral are sans serif. These features enable the identification of other tiles and bricks marked with the same stamp. With the tiles from Oescus (Fig. 3), one can also reconstruct the stamp in its entirety. It can be classified as type VI-117 in Tadeusz Sarnowski's typology.¹³

A number of tile specimens bearing the same legio I Italica stamp have been preserved in situ in Sector IV at Novae, making it possible to date them. Tile no. 31-98c (Fig. 7) was discovered in the pavement of the legionary hospital courtyard, next to the temple of the healing deities, in its construction phase II, dated to the governorship of T. Vitrasius Pollio.¹⁴ Further specimens, no. 33-01c and 46-01c (Fig. 7), were part of the intercolumnium of the south portico, in which a jug dated to the time of Antoninus Pius was found.¹⁵

Further, very similar stamp impressions—differing only in the presence of the crossbar in A—were discovered in Sector XII. These include tile 26-23c, part of the bottom of a well, and tile 78-12c (Fig. 7), used as cladding at the pool in the west wing of the so-called Peristyle House.¹⁶ The largest quantity of such stamped ceramics was found in situ in the hypocaust system of that

¹³ SARNOWSKI 1983, p. 37, Pl. 5.

¹⁴ RECLAW, ŻELAZOWSKI 2012, p. 56.

¹⁵ DYCZEK 2002, p. 124.

¹⁶ DYCZEK 2018, p. 60.

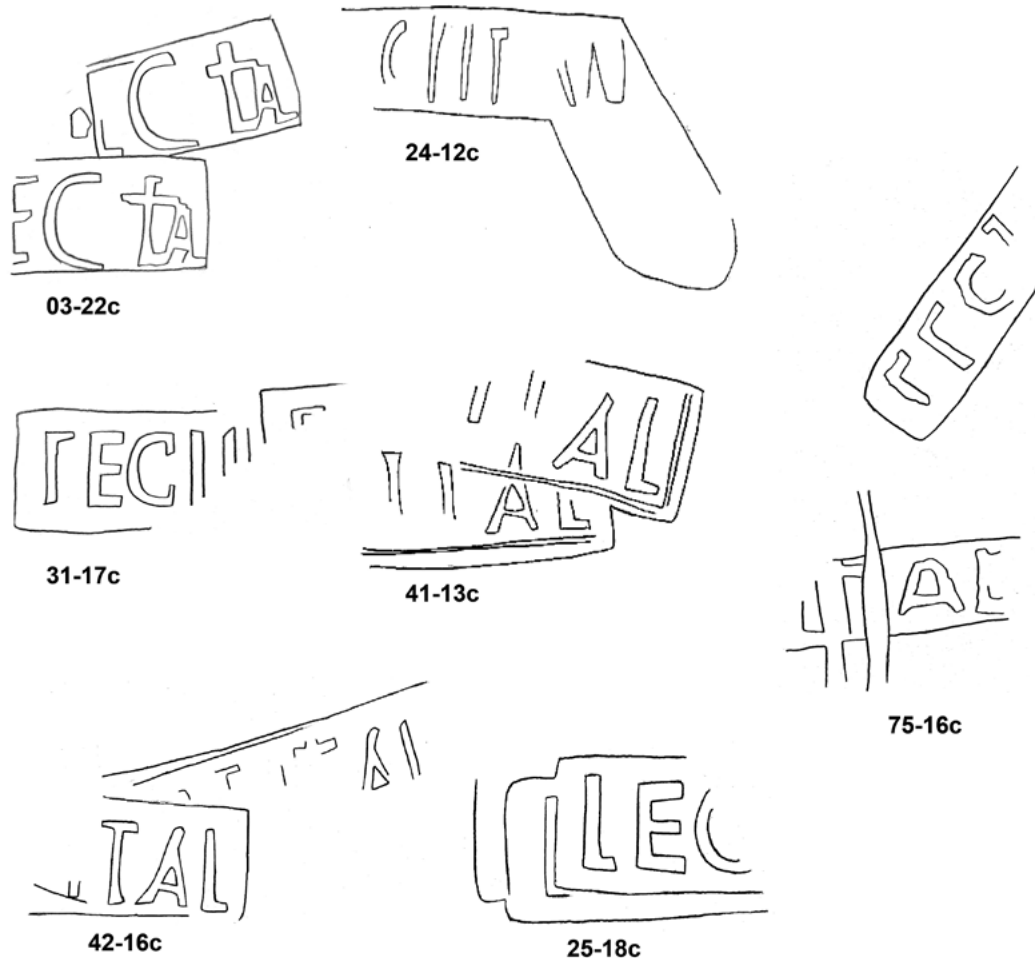


Fig. 4. Roof tiles with multiple stamp imprints (drawing M. Duch).

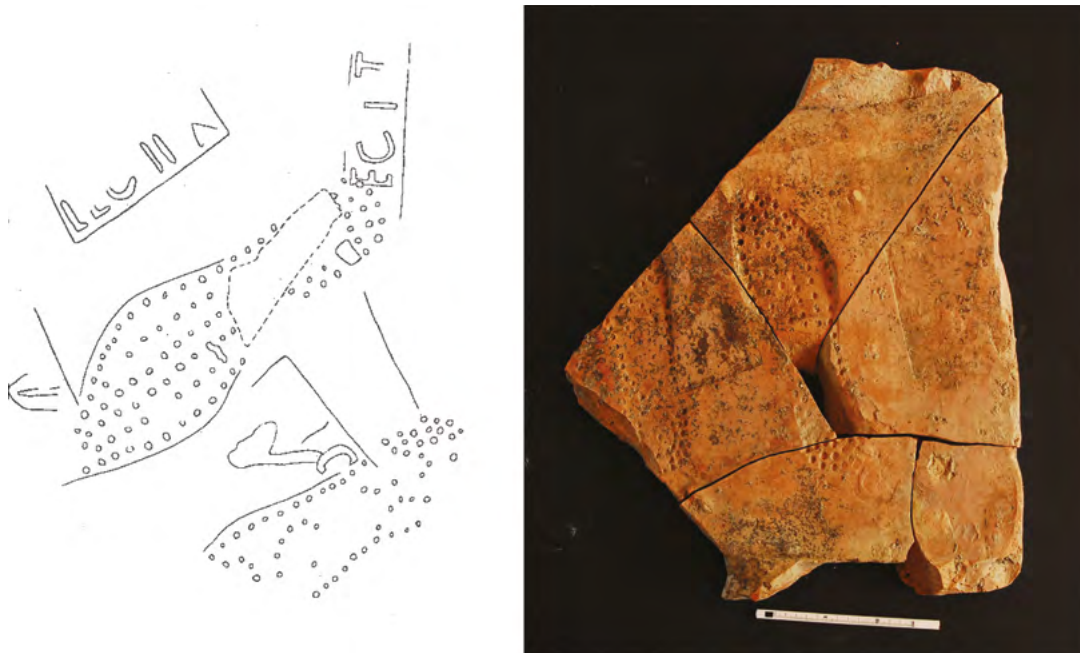


Fig. 5. Double stamped roof tile by legio I Minerva (drawing M. Madej).



Fig. 6. Roof tile with multiple stamp imprints and caligae (drawing M. Duch).

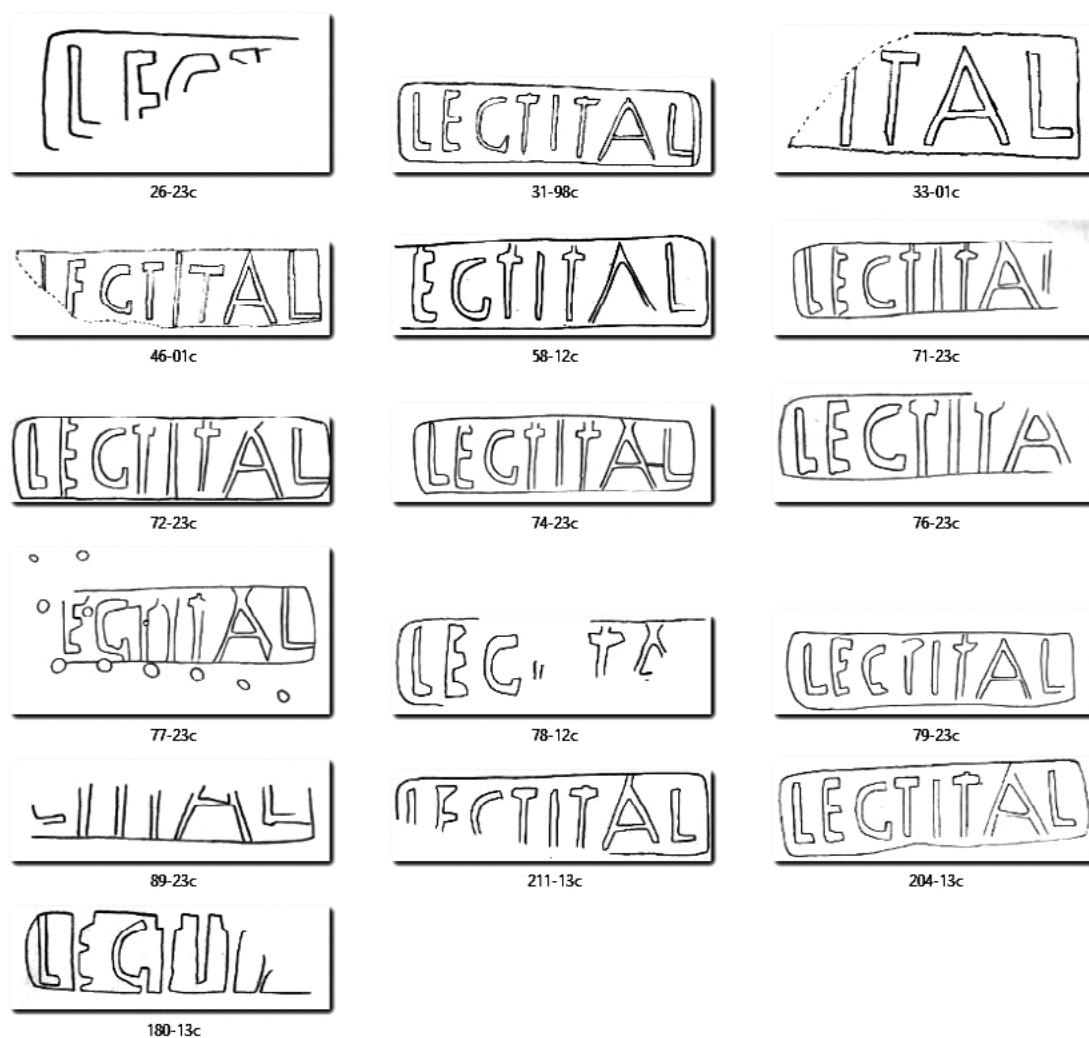


Fig. 7. Stamps LEGITAL in a rectangular frame (prepared by M. Duch).

feature: 71-23c, 72-23c, 74-23c, 76-23c, 77-23c, 79-23c, 89-23c (Fig. 7). The finds from the so-called ceramic conduit, which cuts Sector XII nearly in half, are crucial to the dating of that stamp type. The tiles in question (58-12c, 211-13c, 204-13c, 180-13c – Fig. 7) were discovered there together with the tiles of legio XI Claudia and legio I Minerva, which determines the *post quem* date.

The above analogies include only those examples which, in palaeographic terms, do not raise any doubt about their stamp type classification. Consequently, it may be presumed that the tiles marked with such a stamp were produced between the reigns of Trajan and Antoninus Pius. Considering the numerous presence of such stamps on roof tiles and the analogous finds from Oescus (which ceased to be a legionary fortress after the Dacian War),¹⁷ the tile discussed here should be dated to the reign of Trajan, most probably to the period of preparation for the war, when the construction of the legionary hospital at Novae completed in 100–101.¹⁸

While the legionary stamp on the tile in question is by no means unusual and commonly occurs in Sectors IV and XII, the FAVS stamp is fairly unique. The previously cited parallels with Oescus FIR(mus), MAX(imus), PROCV(lus) and VETIA(nus) leave no doubt that FAVS also denotes a name and should be read as:

- FAVS(tus)
- FA(BI)VS
- FA(bian)VS
- FAVS(tinus)
- F(l)AV(ianu)S

According to Rumen Ivanov, the combination of the stamp of legio I Italica and four different names (FIR, MAX, VETIA, PROCVL) from Oescus should be attributed to the overseers of individual workshops (*officinae*) operating within one military brickyard, which is borne out by the uniform quality and colour of the fired clay.¹⁹ Tadeusz Sarnowski shared that view²⁰, adding that such a supervisor did not have to be a high-ranking officer, but a soldier acting as *immunis figlinae* or *in figlinis magister*.²¹ This is corroborated by an inscription from Drobeta (Dacia) in which *in figlinis magister* had 60 soldiers under his command.²² Renate Kurzmann drew attention to two inscriptions: from Mainz, mentioning *custos castelli figlinarum*, and from Bonn, which referred to two *immunes figlinarii*. Following extensive analysis of the various schools of research into stamped building ceramics, Kurzmann concluded that the stamping procedure remained at the discretion of ordinary soldiers working in the brickyard. The occasional use of name stamps suggests that those practices varied depending on the period and the location.²³ Jerzy Żelazowski, who analyzed C ANT MAGN [Caius Antonius Magnus] stamps from Novae put forward an interesting theory. Specifically, he argued that name stamps were not necessarily relevant to the manufacturing process as such, but had more to do with the purpose of the building material, i.e. specific undertakings. According to Żelazowski, the stamps may have featured the names of those responsible for a particular construction project rather than the manufacturing supervisors.²⁴

It is also possible, although admittedly unlikely, to consider the hypothesis that the names of the governors of Lower Moesia were imprinted on the tiles. For example, the FAVS stamp discussed in this article could potentially refer to:

- Quintus Fabius Postuminus, governor in 102–103,
- Caecilius Faustinus, who held the office of governor in 103–105,

¹⁷ BOJANOV 2008, p. 69.

¹⁸ CIOLEK, DYCZEK 2011, p. 16.

¹⁹ IVANOV 2002, p. 17; IVANOV 2006, p. 135.

²⁰ SARNOWSKI 1983, p. 33.

²¹ SARNOWSKI 1983, p. 40.

²² IDR II 1, 107: “Aurelius Mercurius milis c(ohor)tis I Sagitt(ariorum) in figlinis magister super milites LX”.

Authors of IDR II admit that “LX” may also be read as “IX”, which would mean 9 persons instead of 60.

²³ KURZMANN 2006, p. 228.

²⁴ ŻELAZOWSKI 2015, pp. 249–256.

- Marcus Iallius Bassus Fabius Valerianus, governor in 162,
- Marcus Servilius Fabianus Maximus, governor in 162–166.

Similarly, it could be speculated that the MAX stamp may be associated with:

- Manius Laberius Maximus, governor of Lower Moesia in 100–102,
- Marcus Servilius Fabianus Maximus, who held that office in 162–166²⁵.

As for the PROCVL stamp, the only governor known to bear this name was Titus Pomponius Proculus Vitrasius Pollio. On this basis, a tempting interpretation arises that these stamps may contain the names of governors of Lower Moesia from the early second half of the second century. However, the archaeological data from sections IV and XII concerning the impressions of these name stamps (Fig. 7) are not entirely conclusive, although such a dating cannot be ruled out.

It remains difficult to explain the presence of such roof tiles at Oescus in the second half of the 2nd century, as by that time the site functioned as a Roman colony rather than a military camp²⁶. The LEGIITAL MAX and LEGIITAL PROCVL stamps were found together with LEGIITAL VETIA and LEGIITAL FIR stamps, for which no governors of such names are known from the 2nd century. Moreover, these tiles were discovered at Oescus alongside stamps of Legio XI Claudia, which are dated to the early 2nd century. The conclusion, therefore, is clear: these stamps do not refer to the names of provincial governors.

The name (nomen) FIR(mus) or cognomen FIR(mius) is quite common and attested for legio I Italica including centurions.²⁷ As well as PROCVL(us), for example, Lucius Valerius Proculus had a very prolific military career, he was also a centurion of the I Italic legion.²⁸

Of course, this raises the tempting possibility of attributing the LEGIITAL PROCVL stamp to the same category, and thus accepting the conclusion that the stamps FIR, MAX, PROCVL, VETIA, and FAVS represent the names of centurions of the Italic legion responsible for the production of the tiles. Among the names listed, only VETIA(nus) presents a certain problem, as it is a rather rare name—possibly a derivative of the Celtic name Vettius²⁹ or a reference to the gens Vettia³⁰—with the name potentially misspelled by the tile maker. Other interpretations appear much less likely due to the lack of relevant parallels, such as:

- V(exilatio) E(xercitus) T(r)IA(ni) (fecit) – “a detachment of Trajan’s army made [this]”;
- V(exillatio) E(xercitibus) T(r)IA(ni) (fecit) – “a detachment from the forces of Trajan made [this]”;
- (ex) VE(exilationis) T(egu)LA(rium) – “from the tile workshop of the detachment”; however, this interpretation should rather be rejected, as the inscription appears to contain the letter I rather than L, which makes such a reading implausible.

The only inscription TRA’EX on a ceramic pipe from Novae³¹ can be interpreted as (teglaria or figlina) TRA(nsdanubiana) EX(ercitus), as proposed by Tadeusz Sarnowski.³² Martin Lemke, however, cautiously suggested that TRA in this inscription might refer to Trajan

²⁵ On list of Lower Moesian governors see: BOTEVA 1996, pp. 239–247; Stein 1940, pp. 58–111; The short list on Wikipedia is very helpful: https://en.wikipedia.org/wiki/List_of_Roman_governors_of_Lower_Moesia (01.10.2024).

²⁶ BOJANOV 2008, p. 69.

²⁷ *ILatBulg* 59: Firmus Aspendo veteranus legionis I Italicae ...; *CIL* III 6176: C. Valerius Firmus (centurio) legionis I Italicae; *CIL* III 7514: Firmus (centurio)

legionis I Italicae; cf. *ILatBulg* 63: L. Firmius Velentinus veteranus; *ILatBulg* 178: Firmus veteranus ... legionis XI Claudia; *ILatBulg* 397: Iulius Firmus; *ILatBulg* 438: Firmus Diophanti;

²⁸ *ILatBulg* 432.

²⁹ *CPNRB* – Vettius.

³⁰ GAFFIOT 1934, Vettianus.

³¹ KOLENDO, KOWAL 2011, p. 72, Figs. 7–8.

³² SARNOWSKI 2016–2017, p. 62.

(TRA)³³, similarly to the stamps from Leyon bearing the inscription DEC' TRA, which can be read as DEC(ius) TRA(ianus).³⁴

Keeping the above in mind, regarding LEGI[ITAL] FAVS and also LEGIITAL MAX, LEGIITAL VETIA, LEGIITAL FIR, and LEGIITAL PROCVL roof tiles, one must agree with Rumén Ivanov and Tadeusz Sarnowski. FAVS is an abbreviated name of the supervisor of a workshop at the brickyard, which operated as a distribution center for the legionary camps at Oescus and Novae. The practice whereby the supervisors additionally marked the tiles already stamped as legio I Italica product with their names was short-lived rather than enduring. First, it is observed only with one type of LEGIITAL stamp, which was often found on tiles in the ruins of the *valetudinarium*. This hospital was built for Trajan's Dacian War, between autumn 100 and spring 101.³⁵ Oescus continued as a military base until the end of that conflict. All that suggests that a centre which manufactured building ceramics, with at least five workshops (FIR, VETIA, PROCVL, MAX and FAVS) to supply Oescus and Novae, functioned immediately before Trajan's Dacian War. The example of Novae attests to the high demand for building materials at that time, as the camp underwent major construction works: the so-called Flavian baths were demolished and a hospital was built, the commandant's headquarters were rebuilt and many canals were extended.³⁶ The undertaking required an enormous amount of labour and well-organized logistics, especially during such a period of history. The brickyard that supplied Novae and Oescus had to be in a strategic location with deposits of high-quality clay and fuel (wood) at hand. Transport by road and even more so by river was not an obstacle, as evidenced by the fact that many bricks of legio I Italica are discovered—in contexts linked to Trajan's Dacian War—far north of the Danube.³⁷

Summary

A tile documented as no. 20-23c (Fig. 1) was discovered in Sector XII at Novae. On its surface two different stamp impressions were determined: one of legio I Italica (LEGI[ITAL]) and the other featuring the name FAVS, which may be read as: FAVS(tus), FA(BI)VS, FA(BIAN)VS, FAVS(tinianus), or F(l)AV(ianu)S. This is the first tile fragment discovered at Novae to bear that type of stamp impression. Very similar specimens have discovered been at Oescus, with the same stamp of legio I Italica, as well as other—albeit different—names, i.e. FIR(mus), MAX(imus), PROCVL(us) and VETIA(nus). These analogies warrant the conclusion that FAVS refers to an overseer at a brickyard where at least five teams were employed to supply the construction undertakings at Novae and Oescus during the preparation for the war with the Dacians under Emperor Trajan.

³³ LEMKE 2021, p. 186.

³⁴ KURZMANN 2006, pp. 250–251.

³⁵ CIOŁEK, Dyczek 2011, p. 16.

³⁶ PARNICKI-PUDEŁKO 1990, p. 65; GENČEVA 2002, p. 122; DYCZEK 2011, pp. 103–116; SARNOWSKI 2001, pp. 31–37.

³⁷ ZAHARIADE, DVORSKI 1997, p. 19.

Abbreviations

<i>CIL</i>	<i>Corpus Inscriptionum Latinarum</i> , ed. TH. MOMMSEN <i>et alii</i> , Berlin 1863–.
<i>CPNRB</i>	Paul Russell, Alex Mullen, Celtic Personal Names of Roman Britain < www.asnc.cam.ac.uk/personalnames/index.php?id=3 > [accessed 28 November 2024].
<i>IDR</i>	<i>Inscripțiile Daciei Romane I. Diplomele militare și tăblițele cerate</i> [Inscriptions of Roman Dacia I. Military diplomas and wax tablets], ed. I. I. RUSSU <i>et alii</i> , București 1975.
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Michał Duch
 Institute of European Culture in Gniezno
 Faculty of History
 Adam Mickiewicz University of Poznań
 orcid.org/0000-0003-0555-2798

Michał Duch

***LUDUS LATRUNCULORUM* GAME BOARD FROM NOVAE (MOESIA INFERIOR)**

Abstract: This paper concerns an unusual tile featuring an engraved *latrunculi* game board, a *planta pedis* stamp and the letter “h”, traced with a finger. This is the best preserved game board discovered to date in Sections IV and XII at Novae.

Keywords: Novae, Moesia Inferior, *ludus latrunculorum*, building ceramics, brick stamps, legio I Italica, *planta pedis*

Novae¹ is located in northern Bulgaria, several kilometres east of the town of Svishtov, in a location where the Danube bends strongly southward. It offered a convenient crossing point for the northern tribes in their attempts to penetrate into the Balkans. For this reason, the Romans built a legionary fortress there to serve as a blocking point. Presumably, legio VIII Augusta² was stationed here from the mid-40s CE, only to be replaced in the 70s by legio I Italica, which remained in Novae until the Hun invasion in the mid-fifth century. In the fourth century, Novae became a municipal centre of the province of Moesia Secunda.³ Excavations in Novae, carried out by the Institute of Archaeology of the Bulgarian Academy of Sciences and the University of Warsaw began in 1960, while Adam Mickiewicz University in Poznań joined in the effort in 1970. At present, five archaeological teams work at Novae: two Bulgarian and three Polish (two from the University of Warsaw and one from Adam Mickiewicz University in Poznań). During the 65 years of excavations, the researchers unearthed and explored the defensive walls and gates, elements of wooden buildings, *principia*, the *valetudinarium*, legionary and civilian baths, and fragments of the barracks. As for features dating to later periods, a magnificent basilica, houses and villas and artisan workshops were discovered.⁴

In Section IV, which had been regularly surveyed since 1960, archaeological work terminated in 2010. In 2011, a team from the Antiquity of Southeastern Europe Research Centre at the University of Warsaw launched large-scale excavations in Section XII. That area constitutes an excellent record of how settlement at Novae progressed: from the beginning of the fortress,

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² This view has recently been challenged, see LEMKE 2018, pp. 73–87.

³ On the history of Novae see RÓŻYCKI 2016, pp. 455–478.

⁴ DYCZEK 2008, pp. 31–70; DYCZEK 2024.

⁵ DYCZEK 2018, pp. 27–72.

through the Late Antique period and into the early Middle Ages. According to the researchers, legio VIII Augusta built the earliest layers of earthen-timber barracks which were later pulled down by legio I Italica. In the north-western part of that site, the latter constructed the so-called Peristyle House, which functioned until the mid-third century when, just as the *valetudinarium* in Section IV, it fell into disuse. Between 270 and 280, the ruins were converted into a new, even more imposing complex with a central courtyard that may have served public functions, being e.g. the seat of a local authority.⁵

In 2024, archaeological research continued in Section XII in the southern wing of the Peristyle House, where baths—integral to the building—were to be found. Excavations revealed elements of floor heating (*hypocaustum*) and wall heating (*tubulatio*) as well as interiors used for cold baths (*frigidarium*) and hot baths (*tepidarium*). The floors were made of ceramic breakstone, which made them impermeable and resistant to moisture. The interiors were decorated with coloured plaster. The baths strata contained expensive handicraft items, such as bronze ladles and shards of imported amphorae. It would follow the building referred to as the Peristyle House was a residential structure, which warrants the conjecture that it may have been the so-called Centurion's House.⁶ Therefore, it is anything but surprising that a board for *ludus latrunculorum* (Figs. 1–2) together with a pawn (*latro*) was discovered in the service room adjoining the baths, in the layers dating to the early third century (Fig. 3).⁷ In ancient Rome, the game was regarded—especially among the Stoics—as a worthy pastime that nurtured logical thinking, strategic mindset and Roman virtues,⁸ in other words a game perfectly suited for the officers in the Roman army. On the other hand, Ulrich Schädler notes that the Greek game *poleis* relied on similar mechanics to *latrunculi*, but since dice were used to play it, might have been preferred by the legionaries.⁹

Description of the relic (Figs. 1–2)

Tegula, inv. no.: 10/24c

Tile dimensions: 42 × 47 × 3 cm

Board dimensions (at the widest points): 38 × 39 cm

Hectare XVIII; Square 226

South 1.00; East 2.59 m.

Depth: 47,75 m.a.s.l.

Layer: debris of the Peristyle House baths, service room

The “chessboard” (*tabula latruncularia*) covers almost the entire surviving fragment of the tile in question (10-24c, Figs. 1–2). It was engraved after the tile was fired, which may be inferred from the visible chipping on the lines; such an effect would not have occurred if the grid had been made before the firing process. It is worth noting that the tile is covered with a green residue, which indicates that it was exposed to moisture (which would correspond to the location of discovery, i.e. in the baths area), but the residue is not present in the engraved lines. The lines were traced somewhat crookedly and with little precision, producing 13 fields in the upper horizontal row and 12 in the bottom one. The final number of fields in the horizontal line remains unknown, since the tile has not survived in its entirety, though certainly it was no less than 10. To date, seven fragments of similar geometric patterns that may have also served as game boards have been found in Sections IV and XII, but none in a condition similar to the relic in question. Five of those were certainly made on raw tiles, which means that they had

⁶ DYCZEK 2018, pp. 43–61.

⁸ SCHÄDLER 1994, p. 60.

⁷ I am grateful to Prof. Piotr Dyczek for information about the location of discovery.

⁹ SCHÄDLER 1994, p. 50.



Fig. 1. A photo of a roof tile no. 10-24c with a drawn game board for *ludus latrunculorum* (photo M. Duch).

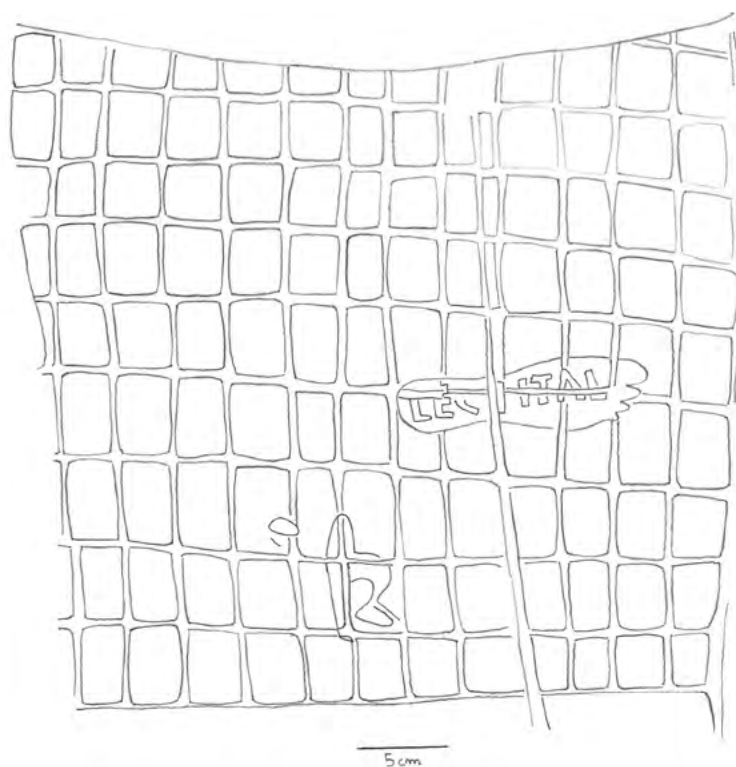


Fig. 2. A redraw of the game board for *ludus latrunculorum* carved on roof tile no. 10-24c (M. Duch).



Fig. 3. Section XII, location of the game board discovery (prepared by B. Wojciechowski).

been designed as game boards in the brickyard prior to firing. The major advantage of ceramic game boards was their portability, making it possible for the game to be played anywhere, not necessarily in a game room.

The board in question (10-24c, Fig. 1) is quite large. Varro suggested that they measured 6×6 fields,¹⁰ but smaller ones were also discovered elsewhere on the former territory of the Roman Empire. The boards made by equites of ala II Flavia at Petavonium had 8×8 (though not preserved in their entirety) and 8×9 fields.¹¹ Six *ludus latrunculorum* boards, carved in stone—one of which measured 10×10 fields—were discovered at the site of a fort in Abu Sha'ar on the

¹⁰ Varro, *De lingua Latina*, 10, 22; SCHÄDLER 1994, p. 48. ¹¹ CARRETERO VAQUERO 1998, p. 125, Fig. 2.

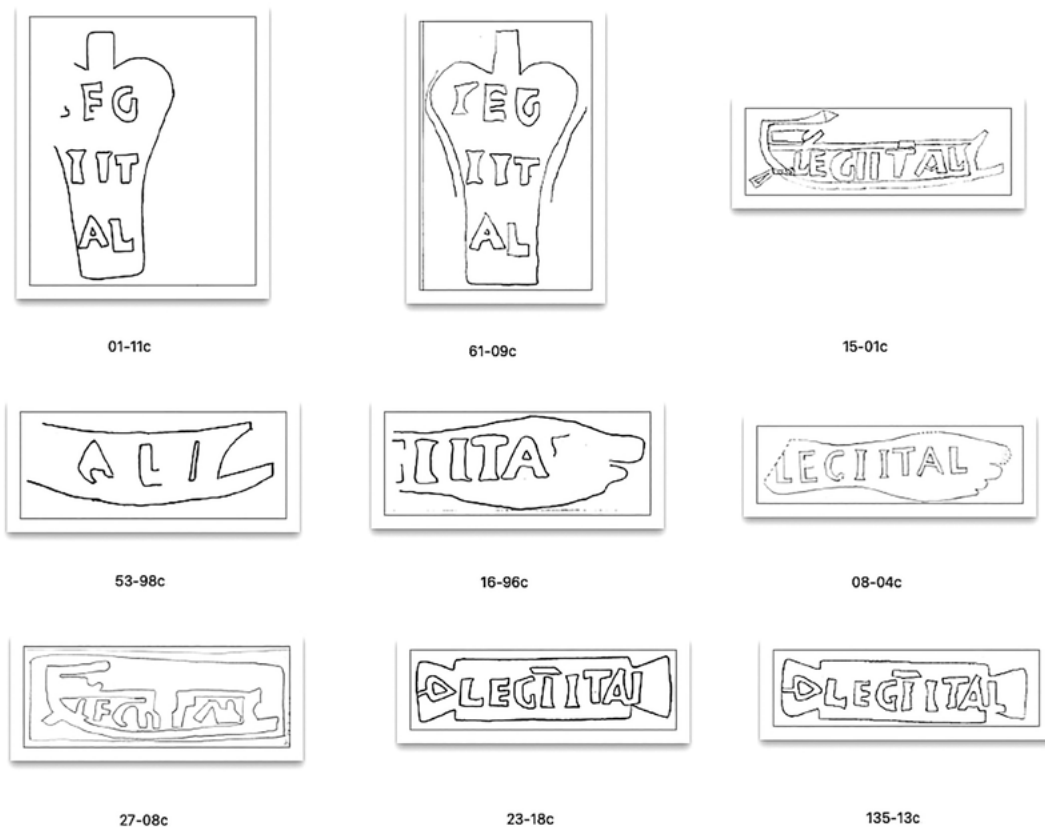


Fig. 4. Drawings of stamps with a non-rectangular frame from Novae (authors of the drawings unknown, prepared by M. Duch).

Egyptian Red Sea coast, about 20 km north of the center of Hurghada.¹² A board discovered in Chester had 8×9 fields,¹³ whereas 10×10 and 9×10 field boards were found in Dover. A slate slab with 8×8 engraved fields as well as a fragment of 8×6 fields was documented in Exeter. A tile board with 9×9 fields was found in Mainz.¹⁴ According to the author's knowledge, the only larger game board known was the one recently discovered in the republican castellum Puig Castellar de Biosca in Lleida (Catalonia), consisting of 11×16 squares.¹⁵ In consequence, there are three possible explanations which account for the large number of fields on the board from Novae: it may have been an adaptation of one of the game's variants (local?), an error in design, or the game may have been played only on a part of the board, without using the entire surface.

Almost centrally, the board features an intersected, foot-shaped (*planta pedis*) stamp of legio I Italica, corresponding to type VI-159 in Tadeusz Sarnowski's typology,¹⁶ G1-4 according to Nicola Gudea¹⁷, and VI-112a according to Marta Matuszewska.¹⁸ Tadeusz Sarnowski dated the stamp to the fourth quarter of the second century or the first quarter of the third century CE.¹⁹ However, archaeological finds from Sections IV and XII call such dating into question. Specifically, there are two tile fragments with the *planta pedis* stamp of legio I Italica discovered in Section IV, the first of which (08-04c, Fig. 4) was found in the strata dated to the period when

¹² MULVIN, SIDEBOTHAM 2004, p. 612, Fig. 9.1.

¹³ BELL 1969, p. 85.

¹⁴ SCHÄDLER 1994, p. 50.

¹⁵ RODRIGO REQUENA, ROMANI SALA 2021, p. 7.

¹⁶ SARNOWSKI 1983, p. 38, Pl. VI.

¹⁷ GUDEA 2003, p. 211, Fig. 11.

¹⁸ MATUSZEWSKA 2006, p. 58, Pl. X.

¹⁹ SARNOWSKI 1983, p. 61; DUCH 2017, p. 106, Fig. 7.

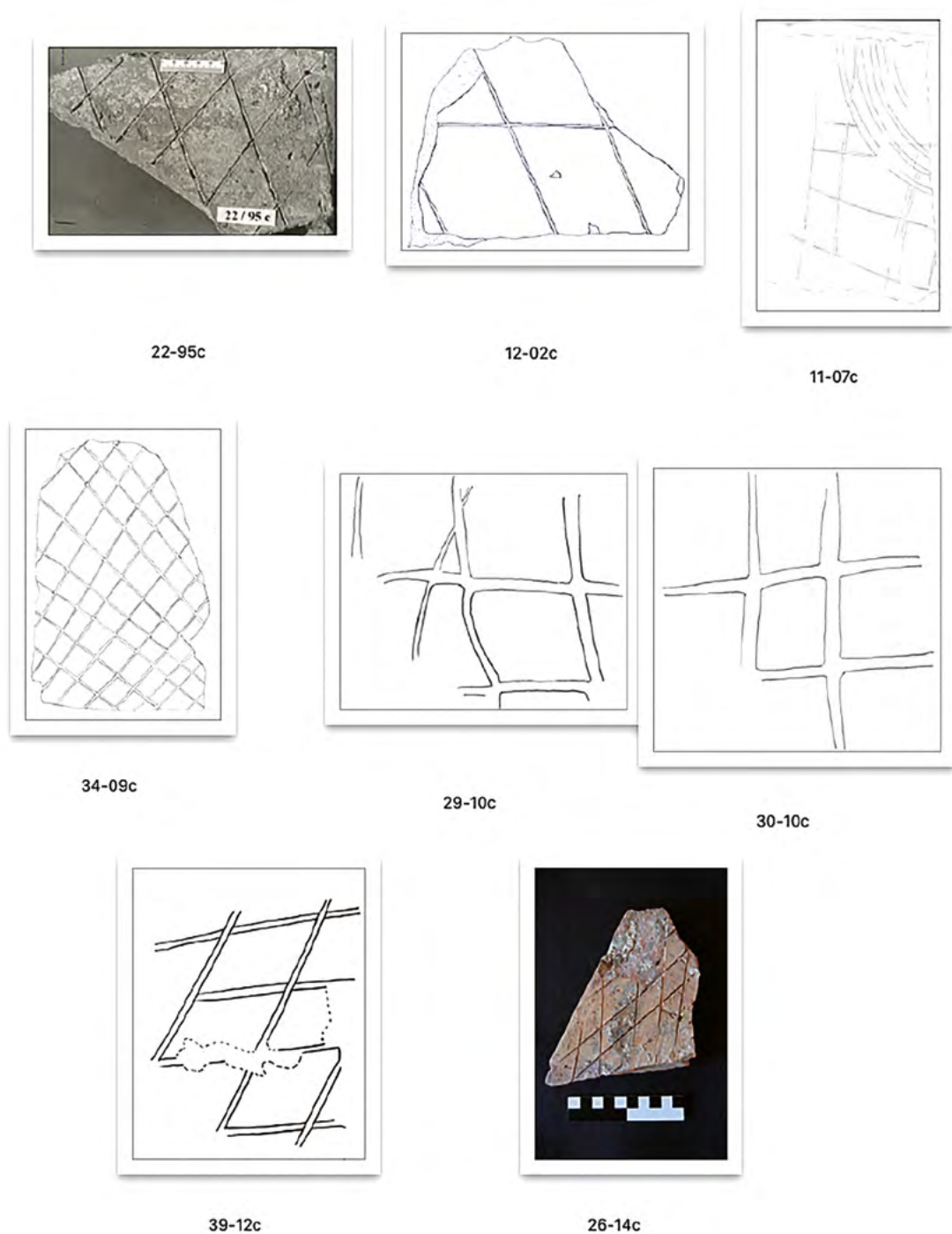


Fig. 5. Fragments of roof tiles with a geometric pattern from section IV and XII of Novae (authors of individual tracings unknown, prepared by M. Duch).

the legionary hospital was built, i.e. the reign of Emperor Trajan.²⁰ The second (06-01c, Fig. 4) formed the enclosure of the channel running along the outer portico of the military hospital in Section IV, in the Via Praetoria, though regrettably it has been preserved very fragmentarily.

²⁰ Information obtained from Prof. Piotr Dyczek.

Moreover, there is a third relic—16-96c (Fig. 4)—originating from the debris of the legionary hospital roof, which makes it difficult to determine whether it was placed there during the construction of the hospital or later, in the course of renovation.²¹ Given such stratigraphic data, one can hardly assert that tiles with the *planta pedis* stamp were certainly produced as early as the reign of Trajan. In this context, attention should be drawn to other equally unusual stamps (Fig. 4), whose frame differed from the most common rectangular shape: stamps stylized as a ship, eagle and *tabula ansata*. The latter are attested already in the Flavian period.²² Those whose shape resembles the legionary eagle were dated to the same period as the *planta pedis* stamps.²³ However, they were discovered in situ in the courtyard of the legionary hospital near the *sacellum*, phase II paving (53-98c, Fig. 4), which is dated to the governorship of T. Vitrasius Pollio,²⁴ in the entrance threshold between rooms 8 and 9 of the *valetudinarium* (15-01c, Fig. 5). As for the building ceramics marked with a ship-like stamp (*liburna*²⁵ or *birema*²⁶), their discoveries can be divided into 4 phases:

- demolition of the legionary bath and construction of the *valetudinarium*: 33-08c, 31-08c, 13-08c, 27-08c, 18-08c, 25-08c, 24-08c, 39-08c, 53-98c, 30-98c
- use of the *valetudinarium*: 08-02c, 26-02c, 15-01c, 41-00c, 28-93c
- legionary hospital abandoned: 113-00c
- civilian development: 11-02c

Such an assignment to particular phases relies solely on the criterion of depth of discovery. However, this approach may be problematic given that these discoveries do not have a clear archaeological context, while brick artefacts are highly “mobile”, being displaced from the lower to the upper strata and vice versa due to erosion and levelling done for construction purposes. Thus, it would be safer to presume two possible datings, either to the Trajanic period—as evidenced by multiple specimens of such bricks in the stratigraphic layers dated to the construction of the legionary hospital—or to the governorship of Vitrasius Pollio in Lower Moesia, i.e. in 156–159. An additional argument in favour of dating those stamps to the Trajanic period is that in terms of typology, the same representations are found on the Trajan’s column.²⁷

In addition to the stamp, the artefact is marked with a finger-drawn letter “h”, identical to the one on the tile fragment inv. no. 78-17c (Fig. 4), found at the top of the wall of the Peristyle House. It is possible that the shard was placed there to fill a gap between stones. However, it is also likely that it ended up there as a result of later intervention.²⁸ Still, thanks to the discovery of the game board tile in question, it may be presumed that the tiles bearing the letter “h” were stamped.

As already noted, the *tabula latrunculorum* tile 10-24c (Figs. 1–2) was discovered in the service room of the baths, in a layer suggesting the final period of its operation in the early third century.²⁹ Even so, one should distinguish between the date when the tile was made and the moment when the game grid was engraved on its surface, since this was executed after firing. Thus, it is possible that the tile in question was produced during the reign of Trajan or the governorship of T. Vitrasius Pollio while the *tabula latrunculorum* was engraved on it in the first half of the third century, before the Peristyle House was abandoned.³⁰ The reign of Septimius Severus saw a number of refurbishment works carried out in the Novae area,³¹ most certainly in Section XII

²¹ Information obtained from Prof. Piotr Dyczek.

²² DUCH 2012, pp. 259-282.

²³ SARNOWSKI 1983, p. 61.

²⁴ RECLAW, ŻELAZOWSKI 2008, p. 56.

²⁵ SARNOWSKI, TRYNKOWSKI 1986, pp. 536–541.

²⁶ BOUNEGRU, ZAHARIADE 1996, pp. 52–53.

²⁷ BOUNEGRU, ZAHARIADE 1996, pp. 52–53.

²⁸ DUCH 2021, p. 98.

²⁹ Information obtained from Prof. Piotr Dyczek.

³⁰ DYCZEK 2018, p. 58.

³¹ DYCZEK 2018, p. 50.

as well. Damaged tiles—such as the one in question, which exhibits a green tarnish indicative of prolonged moisture exposure—were replaced. Consequently, the dating of the *ludus latruncularum* board discussed here may be narrowed down to a period between the reign of Septimius Severus and the mid-third century.

Apart from the discussed board, seven other fragments of building ceramics were also discovered, featuring geometric patterns that may have also served (or not) as game boards:

1. Tegula: 11-07c (Fig. 5).

Dimensions: $27,8 \times 22 \times 3,4$

Location: Section IV, ha III, sq. 271, south 3,3 m, east 3,3 m, depth 38,23 m a.s.l.

Layer: light brown with fragments of building ceramics and limestone

2. Tegula: 12-02c (Fig. 5).

Dimensions: $14,9 \times 15,8 \times 3,1$

Location: Section IV, ha III, sq. 385, south 3,10 m, east 1,80 m, depth 39,11 m a.s.l.

Layer: debris of the hospital structure

3. Tegula: 22-95c (Fig. 5).

Dimensions: $26 \times 17 \times 2,6$

Location: Section IV, ha X, sq. 73, south 3,0 m, 3.0 m, depth 39,30 m a.s.l.

Layer: debris of the hospital structure

4. Brick: 34-09c (Fig. 5).

Dimensions: $24,9 \times 16,4 \times ?$

Location: Section IV, ha X, sq. 47, south 3,63, east 1,97, depth 39,37 m a.s.l.

Layer: secondary humus

5. Tegula (two fragments of one): 29-10c and 30-10c (Fig. 5).

Dimensions: $11 \times 11 \times 2,5$ and $13,5 \times 13,5 \times 2,8$

Location: Section IV, ha III, sq. 361, south 4,30 m, east 1,63 m, depth 39,42 m a.s.l.

Layer: dark brown with substantial admixture of charcoal

6. Tegula: 39-12c (Fig. 5).

Dimensions: $13,5 \times 13 \times 2,4$

Location: Section XII, ha XVIII, sq. 65, south 2,18, east 4,44, depth 47,18

Layer: dark brown with coals, vicinity the columned portico of the civilian structure.

7. Tegula: 26-14c (Fig. 5).

Dimensions: $16,8 \times 10,5 \times 3,6$

Location: Section XII, ha XVIII, sq. 88, south 3,36 m, east 3,39 m, depth 47,38 m a.s.l.

Layer: debris of the roof of the Peristyle House

The first fragment (11-07c) was discovered in the construction strata of the *valetudinarium*. The second (12-02c) originated from the period when the legionary hospital remained in use, i.e. from the second to the mid-third century. The third (34-09c), fourth (16-96c) and fifth (29-10c and 30-10c) should also be associated with the hospital's operation, but they were discovered in layers dating to the final phase of the facility (they may have been reused). The last two (39-12c, 26-14c) should be associated with the period of the Peristyle House (from Vespasian to the mid-third century).

The game board, discovered at Novae in section XII, in the utility layers of the baths of the Centurion's house, was engraved on an already fired tile between the reign of Septimius Severus and Maximinus Thrax. The tile itself, produced in the first half of the second century, contains on its surface the stamp imprint of the legio I Italica in the shape of a foot (*planta pedis*) and the letter 'h', written with a finger before firing. The board in question is quite large, which may be explained by the local variant of the ludus latrunculorum game or by the fact that the entire surface was not played. It is so far the best preserved board discovered in sections IV and XII of Novae. Seven other smaller fragments have also survived to our times from these sections featuring geometric patterns that may have also served (or not) as game boards (Fig 5).

Summary

This paper analyzes a tile which features a *latrunculi* game board, engraved after firing, a *planta pedis* stamp, and a finger-drawn letter "h". The relic was discovered in the area of the service room adjacent to the baths of the Peristyle House, in a layer dated to the third century. The tile was produced in the first half of the second century, while the game board was made between the reigns of Septimius Severus and Maximinus Thrax. The artefact is unusual in that the game board is larger than those found at other archaeological sites, both in Egypt and Britain, with a grid comprising at least 12 × 10 fairly carelessly carved fields.

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Michał Duch
Institute of European Culture
Adam Mickiewicz University in Poznań
<https://orcid.org/0000-0003-0555-2798>

Adrianna Gizińska

THE WEAK LINK? MOESIA INFERIOR DURING THE CLOSING YEARS OF SEVERUS ALEXANDER'S RULE (230–235 CE)

Abstract: This paper explores the geopolitical landscape and military activities in Moesia Inferior during the closing years of Severus Alexander's reign between 230–235 CE. Drawing upon epigraphic evidence and historical accounts, the study examines the construction and restoration of fortifications, road networks, and strategic outposts in response to escalating threats from barbarian tribes and the Persian Empire. The investigation highlights the pivotal role of provincial governors, such as C. Messius Q. Decius Valerianus, in overseeing these initiatives and adapting to shifting geopolitical dynamics. Additionally, it examines the imperial visit of Severus Alexander to Moesia Inferior in 234 CE, shedding light on the emperor's interactions with local authorities and the impact of his presence on infrastructure projects. Furthermore, the deployment and movements of Roman military units in Crimea and along the north-western part of the Black Sea coast, are explored, emphasizing the strategic significance of these regions. The absence of Lower Moesian units in Severus Alexander's Persian campaign is also examined, with hypotheses proposed linking this occurrence to the looming threat posed by barbarian incursions. An analysis based on available archaeological and written sources sheds light on the situation in the supposedly quiet province of Moesia Inferior, just before the crisis.

Keywords: Moesia Inferior, Severan dynasty, epigraphy, Severus Alexander, Roman Army, Goths

Introduction

The starting point for examining the geopolitical landscape of Moesia Inferior during the final years of Severus Alexander's reign will be one of building inscription.¹ In 1874, a monument was unearthed in Sexaginta Prista (modern-day Ruse, Bulgaria), although it has unfortunately since been lost.² The inscription can be transcribed as follows:

¹ The project has been financed with resources provided by the VI.4.1. "A complex programme of support for UW PhD students – microgrants" (number BOB-IDUB-622-371/2023) programme "Excellence Initiative – Research University", University of Warsaw. I would like to express my gratitude to my supervisor, dr hab. Radosław Karasiewicz-Szczypiorski, professor at the University of Warsaw (Polish Centre of Mediterranean

Archaeology, University of Warsaw), for his invaluable guidance, insights, and feedback on the topic of Roman military presence in the north-western Black Sea region. I would also like to extend my gratitude to my colleague, Tomasz Dziurdzik (curator of Collection of Ancient Art, National Museum in Warsaw) for his insightful and pertinent comments, as well as invaluable assistance in improving my text.

Imp(eratori) Caes(ari) diui Magni Antonini Pii fil(io) | [[diui Severi Pii nep(oti) M(arco) Aur(elio) Seuero]] | [[Alexandro Pio Felici Aug(usto) pon]] | tiff(ici) maximo t(ribunicia) <p=B>(otestate)] IX co(n)s(uli) III p(atri) p(atriciae) [[et Iuliae]] | [[Mamaeae matri]] Aug(usti) n(ostri) et castrorum | [b]aln(e)a coh(ortis) II Fl(aui)ae Britt(onum) [Alexa]n[d]rianae | a so<l=i>o restitutae sub Anicio Fausto Paullino leg(ato) Aug(usti) pr(o) pr(aetore) | per Septimium Agathonicum praef(ectum).³

The monument was erected as a dedication to Severus Alexander and his mother, Iulia Mamaea. The inscription provides evidence of the restoration or reconstruction of the baths of cohorts II Flavia Brittonum Alexandriana.⁴ Septimius Agathonicus,⁵ the *praefectus* of this unit undertook this task under the auspices of the governor of the province of Lower Moesia, Anicius Faustus Paulinus.⁶

The dating of the monument relies on the preserved information regarding the emperor's *tribunicia potestas*. Fragments of the numbers suggest the IX *tribunicia potestas*, indicating the period from December 10, 229 CE to December 9, 230 CE. Due to the scarcity of sources, determining the nature of Anicius Faustus Paulinus' activities in Moesia Inferior remains elusive.⁷

Construction activities within the baths dating back to the Severan dynasty, primarily the reign of Septimius Severus, are documented at several sites in Moesia Inferior and along the north-western coast of the Black Sea.⁸ In Novae, the rebuilding of the baths took place in the initial four decades of the third century CE. The pre-existing building underwent modifications, with its design tailored to accommodate evolving spatial requirements, and a sprawling complex emerged, significantly surpassing the dimensions of the original structure (phase II). New chambers were added from north to south and east to west, with the primary objective seemingly to create a symmetrical layout accommodating two sets of rooms. Bathing areas were seamlessly integrated into a unified complex, introducing the *palestra* as a new component. In the southwestern part of the complex, the *caldarium* housed a hot water pool. The newly constructed southern section of the bath featured a meticulously organized technical zone, composed of interconnected corridors designed for service and transit within the baths, discovered by recent archaeological excavations.⁹

In Chersonesus, at the turn of the second and third centuries CE, or the beginning of the third century CE, notable expansions were made to the garrison bath (identified as building A). In phase 3, the following rooms were added: an apodyterium and a small *frigidarium* equipped with bathtubs, a spacious *frigidarium* designed as a swimming pool, a *tepidarium*, and a *caldarium*. This expansion suggests a considerable increase in the size of the Roman garrison stationed in the area during this timeframe. Notably, under the rule of the Severan dynasty, the Roman garrison, composed of soldiers from legio XI Claudia positioned near the southwestern section of the walls showed increased construction activity. It is plausible that this military unit played a role in the construction of fortifications in this specific part of Chersonesus.¹⁰

² CIL III 7473.

³ Inscription from Epigraphik-Datenbank Clauss/Slaby (EDCS-ID: EDCS-28500191).

⁴ The only feature discovered so far in Sexaginta Prista are defensive walls surrounding an area of 4–5 ha. Hence there is no information where the baths were located (STANČEV 2003, pp. 56–62). For more information about cohorts II Flavia Brittonum see e.g. ARICESCU 1977, pp. 48–49; SUCEVEANU, BARNEA 1991, pp. 65–66; MATEI-POPESCU 2010, pp. 198–199.

⁵ PIR² S 431.

⁶ PIR² A 599; THOMASSON 1984, col. 142, no. 122; STEIN 1940, p. 97.

⁷ This is the only inscription from Lower Moesia mentioning the governor of the province, Anicius Faustus Paulinus.

⁸ Under the rule of Septimius Severus, Tyras and Olbia were incorporated into the province of Moesia Inferior, bringing them under Roman governance see KRÓLCZYK 2017.

⁹ BIERNACKI, KLENINA 2003; BIERNACKI *et alii* 2016, pp. 99–105.

¹⁰ Similar observations can be made regarding other sites in Crimea, such as Balaklava and the Cape of Ai-Todor KARASIEWICZ-SZCZYPIORSKI 2015, pp. 38, 42.

The fort at the Cape of Ai-Todor underwent significant reconstruction and expansion of various facilities under the reign of Septimius Severus and his successors. This included the enlargement of the *thermae* and the expansion of the fort through the addition of an outer wall. The heightened construction activity during this period is associated with the presence of a detachment of soldiers from the legio XI Claudia. The traces of the fort's expansion at the onset of the third century CE could suggest an intention to increase the size of the garrison stationed in this location.

Sources indicate that the Roman military baths at Capidava, constructed during the reign of Trajan in the early second century CE, remained in use through the third century under the Severan dynasty. Evidence supporting this includes bricks bearing the stamp of the legio XI Claudia Antoniniana (LEG XI CL ANT), found in a newly constructed drainage channel.¹¹ Since the legio XI Claudia was awarded the title *Antoniniana* during Caracalla's reign, the presence of these bricks suggests that renovations and upgrades to the baths were likely carried out during this period.

Potential factors influencing construction work within the garrison baths in Sexaginta Prista could encompass strategic considerations, shifts in military presence, or the necessity to upgrade infrastructure to serve various purposes. It is plausible that the construction or reconstruction of the baths in Sexaginta Prista was prompted by the expansion of the garrison stationed there. However, determining the exact reason for such work in 230 CE requires further investigation. Delving into epigraphic sources, local circumstances, and the broader context of the time may provide insights into the specific reasons behind the construction activities during that period.

Barbarians growing in power

Lower Moesia, given its geopolitical and geographical location, occupied a critical position in one of the most vulnerable regions of the Roman Empire. The Balkan provinces served as a crucial geographical link connecting the western and eastern parts of the Empire. By the end of the second century CE, the Goths¹² had established settlements along the northern coast of the Black Sea. Moreover, Sarmatian and Geto-Dacian tribes residing in the regions north of the Danube became increasingly active.¹³ After 225 CE, an economic crisis ensued, attributed to the frequent incursions of barbarian tribes from the north of the Danube and Dacia.¹⁴

In 227 CE, certain G. Baienius Ianuarius, the *primus pilus* of the legio I Italica in Novae erected a statue for Jupiter Depulsor.¹⁵ Marjeta Šašel Kos posited that the cult of Jupiter Depulsor might have origins predating the Roman period, suggesting that his name conceals one of the most significant deities of the Norican divinities.¹⁶ It is important to note that *Depulsor* means “the one who pushes back”. Rienhold Egger suggested that Jupiter Depulsor was a deity associated with warding off diseases and pandemics.¹⁷ However, according to Hans-Georg Pflaum, it was believed that Jupiter Depulsor served to repel enemy attacks.¹⁸ M. Šašel Kos proposed a broader context for the cult, suggesting that Jupiter Depulsor was believed to safeguard its devotees from a range of adversities. This encompassed protection from epidemics, diseases, personal misfortunes,

¹¹ OPRİŞ, RAŢIU, POTÂRNICHE 2018, pp. 6, 19, 22.

¹² The archaeological equivalent of the Gothic settlement in the northern region of the Black Sea is the Chernyakhov culture. Developing across a vast expanse of Eastern Europe, it encompasses territories of present-day Ukraine, Romania, Moldova, and parts of Belarus.

¹³ SARNOWSKI 1988, p. 93.

¹⁴ IVANOV 1983, p. 131.

¹⁵ *IGL Novae* 25 = *IL Novae* 13 = *IL Bulg* 272 = *AE* 1972, 526; KOLENDO 1968; FAURE 2013, pp. 749–750, no. 232; PISO 2017.

¹⁶ ŠAŠEL KOS 1999, p. 126.

¹⁷ EGGER 1929, pp. 202–203.

¹⁸ PFLAUM 1956, pp. 19–23.

financial setbacks, professional failures, and even military attacks.¹⁹ This cult enjoyed particular popularity in Pannonia and Noricum, regions inherently vulnerable to barbarian invasions due to their geographical positioning.²⁰ Within this framework, the cult serves as evidence of a defensive instinct among the Romans in response to invasions. The dedications were not merely pleas for victory but rather they were supplications for the deity's assistance in repelling invaders.²¹ Evidence from both the military community and civilians fails to conclusively show that the cult of Jupiter Depulsor was exclusively military in nature. Instead, it reveals that the choice of this deity was likely influenced by a variety of factors.²² This suggests that Jupiter Depulsor, originating in the regions of Pannonia and Noricum, held broader significance in the everyday lives of these people, extending beyond purely military concerns.²³ According to Tadeusz Sarnowski, the erection of a monument to this deity could signify the involvement of soldiers from the legio I Italica in some battles along the Danube unknown to us.²⁴ However, their deployment might not signify active participation but rather apprehension about potential involvement in future combat. The erection of the monument could stem from a belief that divine intervention could alter the course of events. This suggests a noteworthy religious development, possibly reflecting a new spiritual demand born out of a heightened sense of peril necessitating divine assistance. As emphasized by Tomasz Dziurdzik, regardless of its location, this text highlights a remarkable and highly individualized adoption of customs typical for Novae. Statue of G. Baienius Ianuarius introduces some new elements, which includes a dual dedication, homage to a deity associated with his Norican origins and incorporation of a poetic autobiography.²⁵

During this period, the legion was under the command of Q. Servaeus Fuscus Cornelianus, who had formerly served as the legate of the legio XIII Gemina stationed in Dacia.²⁶ Instances where a legate commanded two legions successively are quite rare and typically occurred during periods of tension and unrest.²⁷ It is widely accepted that such circumstances indicate ongoing or anticipated hostilities, thereby requiring the appointment of experienced and capable legates to command the legions involved or expected to engage in a specific theatre of war.²⁸ Q. Servaeus Fuscus Cornelianus was from Gigthis, a city in Africa Proconsularis, and his career apparently began during the reign of Septimius Severus. Interestingly, after serving as legate of the legio I Italica, he was appointed *legatus provinciae Galatiae* by the emperor. His governorship of the province of Galatia is dated between 228 and 231 CE.²⁹ During that period, the emperor embarked on a campaign to the East against the Parthians. It is plausible that his decision to appoint a former commander of two legions from provinces located in a sensitive part of the Empire, such as Dacia and Moesia Inferior, as the governor of one of the eastern provinces was not merely coincidental. It is possible that Q. Servaeus Fuscus Cornelianus proved himself in Danubian provinces, so the emperor decided to appoint him governor of one of the eastern provinces. In the 30s of the third century CE, the East certainly became one of the most sensitive regions of the Empire.³⁰

There is a lack of information from written sources regarding the invasion of barbarian tribes towards the end of Severus Alexander's reign. Herodian describes the barbarian invasions of 233 CE, noting that Germanic tribes crossed both the Rhine and the Danube, posing a threat to the peoples of Illyria, bordering and neighboring Italy.³¹ The earliest known hoard

¹⁹ ŠAŠEL KOS 1999, p. 127.

²⁰ PFLAUM 1953, p. 451; KOLENDO 1989, p. 1073.

²¹ KOLENDO 1989, p. 1076.

²² HILALI 2010, pp. 463–466.

²³ ŠAŠEL KOS 1999, pp. 126–127.

²⁴ SARNOWSKI 1988, p. 93.

²⁵ DZIURDZIK 2025, forthcoming.

²⁶ *PIR*² S 560.

²⁷ KOLENDO 1968, p. 135; KOLENDO 1989, pp. 1073–1076.

²⁸ ALFÖLDY 1967, p. 77.

²⁹ OKOŃ 2017, p. 224, no. 952.

³⁰ Regarding inscriptions containing information about individuals who were soon to be transitioned to new positions or had received promotions in their careers, both within the senatorial or equestrian orders, see BIRLEY 1979, pp. 495–506.

of eastern denarii in Germania dates back to 231 CE. The initial surge, marked by the emergence of eastern denarii in hoards, is pinpointed to 235 CE, aligning with a string of assaults by Germanic tribes in the early 30s of the third century CE. Hoards unearthed in the region of *Agri Decumates*, and the surrounding limes regions appear to validate incursions by barbarian forces across the Danube, posing a tangible threat to Italy.³² It appears that during the 30s of the third century CE, these invasions did not directly threaten the areas along the lower Danube. It is widely acknowledged in the literature that large-scale invasions of barbarian tribes into the Balkan provinces commenced in 238 CE.³³ Several premises lead me to believe that the movements of barbarian tribes, which disrupted the borders but did not necessarily result in disastrous consequences for the province, commenced as early as the 30s of the third century CE. The initial incursion of barbarian into the regions south of the Danube is believed to have occurred in 214 CE during the reign of Caracalla.³⁴ It appears that the Carpi invasion was swiftly suppressed, and they did not have the opportunity to inflict considerable damage to the province.³⁵ Unfortunately, the available sources are extremely scarce. Only two inscriptions from Moesia Inferior are known,³⁶ likely associated with Caracalla's involvement along the lower Danube.³⁷

Nevertheless, peace seemed elusive in these regions during that decade, as evidenced by coin hoards discovered in the territory of Moesia Inferior.³⁸ Some researchers associate coin hoards found in both Moesia Inferior and Dacia with likely barbarian incursions in the regions following 232 CE.³⁹ It's likely that the portion of the province encompassing the north-western and northern coasts of the Black Sea, probably also Dobruja, had been under threat from barbarian incursions.⁴⁰ It is assumed that several groups of invaders entered Moesia Inferior towards the end of the reign of Severus Alexander.⁴¹ At Sostra, the destruction of fortifications dating to the last years of Severus Alexander's reign is evident. This occurrence is linked to barbarian incursions.⁴² From Tomis, a well-known coin hoard was discovered in Grăniceri district. The hoard was likely concealed during the time of Severus Alexander, probably after 232 CE. It is possible that the hoard was hidden in the *vicus* or in a *villa* north of Tomis when the *bellum Scythicum* broke out.⁴³

The first incursion of barbarian tribes onto the northern coast of the Black Sea occurred between 232 and 235 CE. Meanwhile, towards the end of Severus Alexander's reign, Roman garrisons were withdrawn from Crimea.⁴⁴ The Goths and their allies were reported to have appeared at the mouth of the Dniester in the early years of the third century CE.⁴⁵ According to Vasile Pârvan, barbarian invasions commenced during the reign of Severus Alexander, leading to the capture of Tyras and Olbia by the Goths.⁴⁶ However, it is worth noting that Chersonesus was not subjected to attacks by barbarians during this period.⁴⁷ Narrative and epigraphic sources provide no precise information regarding the date of the Goths' invasion of Olbia. Nonetheless, some scholars propose that the city was devastated during the initial barbarian expedition, occurring between 232 and 235 CE,⁴⁸ or within the broader timeframe of 232–238 CE.⁴⁹ This campaign primarily targeted

³¹ HDN 6.7.2.

³² HELLINGS 2020, pp. 294–296.

³³ HASZCZYC 1975, p. 209; GEROV 1977, p. 126; DIMITROV 2005, p. 79. Subsequently, the Carpi, backed by the Goths, intended to breach the border into the province of Moesia Inferior and ravage Histria.

³⁴ GENČEVA 2003, p. 63.

³⁵ DORUȚIU-BOILĂ 1973; GEROV 1980; BARNEA, VULPE 1968, pp. 201–214; MROZEWICZ 2010, p. 274.

³⁶ *ILBulg* 18 = *AE* 1900, 155 = *CIL* III 14416 = *ILS* 7178 and *ILBulg* 19 = *AE* 1972, 548.

³⁷ *HA M. Ant.* 5.8.

³⁸ GEROV 1977, p. 126.

³⁹ VERTAN 2002, pp. 273–274; POPILIAN, GHERGHE 2003, pp. 107–108.

⁴⁰ BUZOIANU, BĂRBULESCU 2012, p. 48.

⁴¹ VERTAN 2002, pp. 253–254; VARBANOV, IVANOV 2016, pp. 66–69; VARBANOV 2021, p. 64.

⁴² HRISTOV 2015, p. 334.

⁴³ VERTAN 1999, p. 122.

⁴⁴ KARASIEWICZ-SZCZYPIORSKI 2015, pp. 36, 164.

⁴⁵ KARYŠKOVSKIJ, KLEJMAN 1985, p. 126.

⁴⁶ PÂRVAN 1911, p. 11.

⁴⁷ Unlike Balaklava or Cape of Ai-Todor the army returned to Chersonesus in the mid-third century CE (KARASIEWICZ-SZCZYPIORSKI 2015, p. 36).

the regions along the northwestern coast of the Black Sea. The main supporting evidence for this hypothesis includes the cessation of minting activities in Olbia by 235 CE at the latest, as well as the archaeological observation of a layer of destruction within the Olbia citadel.⁵⁰ The initial destruction of Olbia, attributed to the so-called “Gothic” defeat, occurred around 230 CE.⁵¹ This dating is further supported by the discovery of a coin of Severus Alexander within a burnt layer in the so-called Southern House.⁵² However, there are epigraphic sources reliably dated to 248 and 250 CE,⁵³ alongside discoveries of Roman coins ranging from 269 to 270 CE. Also, the tombstone of a soldier from the legio I Italica is likewise dated to the half the third century CE.⁵⁴ These findings suggest that the city may not have suffered such catastrophic effects. The second “Scythian” or “Gothic” campaign against Olbia occurred in 269–270 CE.⁵⁵

A different scenario appears to have transpired in Tyras. Currently, there is no evidence suggesting that Tyras fell during this period.⁵⁶ The final known coins from Tyras date back to the era of Severus Alexander. The decline in coinage production may not necessarily have been solely caused by unrest in the regions and barbarian raids. It’s worth noting that this could be part of a larger phenomenon affecting the eastern provinces of the Roman Empire, driven by the depreciation of currency value and the unprofitability of coin production.⁵⁷ Another issue concerns the name of the city, which appears on the so-called Shield of Dura,⁵⁸ a document believed to have been created around 244 CE.⁵⁹ Certainly, it should be noted that the Shield of Dura does not necessarily imply the occurrence of potential attacks. Instead, it serves as evidence of troop movement along the route from the mouth of the Danube to the East.

When considering Olbia, another issue arises. Arrian, during his visit to the Roman garrisons along the coast of Colchis, documented the stops along the shipping route to the northwestern coast of the Black Sea. Although this account dates back to the reign of Hadrian, he mentions stops such as Chersonesus and Borysthenes as significant points along the trail.⁶⁰ Notably, Olbia is only mentioned in the context of a location accessible by sailing up the river. According to Radosław Karasiewicz-Szczypiorski, this implies that Olbia was situated outside the primary route typically utilized by Roman ships at that time.⁶¹ It appears that the Roman military presence in this region during Roman times was rather limited and not permanently established within the city.

It is plausible that both Tyras and Olbia were attacked during that period. However, both Olbia and Tyras survived, and were promptly rebuilt, likely with the support of the Roman Empire, which remained keen on the swift reconstruction and maintenance of its remote outposts, crucial for the ongoing war against the barbarians.⁶²

⁴⁸ LATYŠEV 1887, p. 211; GAJDUKEVIČ 1955, p. 65; VETŠTEJN 1967, pp. 135–137.

⁴⁹ KRAPIVINA 2007, p. 607.

⁵⁰ VETŠTEJN 1967, pp. 134–137; VETŠTEJN 1968, pp. 142–146.

⁵¹ KRAPIVINA 2007, p. 593; KOKOWSKI 2007, p. 165.

⁵² KRAPIVINA, BUJS’KIH, KRUTILOV 1998, p. 87.

⁵³ First inscription: *IOSPE* P 167 = *AE* 1904, 164; KARYŠKOVSKIJ, KLEJMAN 1985, p. 133; SARNOWSKI 1988, p. 143; ZUBAR’ 1998, p. 130; KARASIEWICZ-SZCZYPIORSKI 2019, p. 153. An altar dedicated to Mercury for the well-being of Philip I the Arab and his son Philip II set up by Pyrrus Bithus. Second inscription: *AE* 2004, 1289; ZUBAR’, KRAPIVINA 2004, pp. 168–169; KARASIEWICZ-SZCZYPIORSKI

2019, p. 153. Inscription on a votive slab mentioning the cohorts I Cilicum Daciana.

⁵⁴ ZUBAR’, KOZUB 2002, pp. 102–109; KARASIEWICZ-SZCZYPIORSKI 2019, pp. 153, 161.

⁵⁵ KRAPIVINA 2007, p. 607.

⁵⁶ KARASIEWICZ-SZCZYPIORSKI 2015, p. 149.

⁵⁷ KUNISZ 1971, pp. 7, 143–144; BUTCHER, PONTING 2014, p. 24.

⁵⁸ KARYŠKOVSKIJ, KLEJMAN 1985, p. 132.

⁵⁹ GAWROŃSKI 2011, pp. 59–66.

⁶⁰ Arrian, *Peripl. M. Eux.* 16.

⁶¹ KARASIEWICZ-SZCZYPIORSKI 2019, pp. 162–163.

⁶² KRAPIVINA 2013, pp. 145–146.

Expeditio Persica

The early 30s of the third century CE marked a significant intensification of the Roman-Persian conflict, a period also known for the *expeditio Persica*.⁶³ Ardashir I launched an attack on the eastern border of the Roman Empire in 230 CE.⁶⁴ According to Herodian, letters reached Rome from the governors of Mesopotamia and Syria, revealing the Persian threat to the eastern territories of the Empire. The Persians aimed to invade Roman Mesopotamia, subjugate nearby barbarian tribes, and cross the Tigris River, posing a direct menace to the Roman province of Syria. In their correspondence, the governors implored the emperor for military intervention.⁶⁵ Initially, Severus Alexander opted to send an embassy to the Persian king in an attempt to resolve the situation through diplomatic means.⁶⁶ Emperor Severus Alexander, along with his mother Iulia Mamaea and advisors, advocated a policy of peace and concessions marked by bribery instead of direct confrontation with enemies. However, this policy came to an abrupt halt in 230 CE when war erupted in the East.⁶⁷

Without waiting for a response, the emperor, strategically buying time, initiated thorough preparations for the imminent military expedition. As recounted by Herodian, there was a widespread mobilization during this period, involving inhabitants from Italy and all Roman provinces.⁶⁸ The expeditionary force primarily comprised units from various Danubian regions, with Herodian specifically noting the inclusion of soldiers from Illyricum in Severus Alexander's army.⁶⁹ Additionally, archaeological sources suggest that maybe some road maintenance activities were undertaken in Danubian provinces, Asia Minor, Arabia, and southern Palestine.⁷⁰

Ardashir I rejected the terms proposed by the embassy sent by Severus Alexander and, in 230 CE, breached the frontiers of the province of Mesopotamia.⁷¹ The Roman expedition, likely commanded by the emperor himself, commenced in late spring of 231 CE.⁷² The *Acta Fratrum Arvalium*⁷³ include a prayer for the safe return and victory of Severus Alexander.⁷⁴ By the end of summer 231 CE, the emperor reached Antioch on the Orontes.⁷⁵ The course of the expedition is well-documented through Herodian's work. Despite initial Roman successes,⁷⁶ the Persians managed to inflict losses on the Roman forces in the fall of 232 CE.⁷⁷ Severus Alexander, along with a contingent of troops, retreated to Antioch during the winter of 232/33 CE. Harsh conditions and challenging terrain resulted in the deaths of many soldiers, leaving only a few to reach the Roman side of the *limes*.⁷⁸

In the winter of 232/33 CE when stationed in Antioch and preparing for another assault on the Persians, Severus Alexander received distressing news regarding disturbances unfolding in the western provinces. Governors reported to the emperor that Germanic tribes had breached the frontiers of the Empire along the Rhine and Danube, wreaking havoc on imperial territory.⁷⁹ The Alamanni raids during 232–233 CE particularly impacted the forts in the Agri Decumates region, with the barbarians crossing the Rhine near Argentorate, the camp of the legio VIII Augusta, and plundered Gaul.⁸⁰

The challenges in the western provinces prompted Severus Alexander to make the decision to withdraw. Leaving a part of his forces in the East to safeguard the frontiers,⁸¹ the Persian expe-

⁶³ KRÓLCZYK 2013; 2015.

⁶⁴ KRÓLCZYK 2015, p. 137.

⁶⁵ HDN 6.2.1.

⁶⁶ HDN 6.2.3–4.

⁶⁷ DE BLOIS 2002, p. 16.

⁶⁸ HDN 6.3.1.

⁶⁹ HDN 6.4.3; 6.2.

⁷⁰ KRÓLCZYK 2013, pp. 20–24.

⁷¹ HDN 6.2.5

⁷² HALFMANN 1986, p. 231; KRÓLCZYK 2015, p. 141.

⁷³ HENZEN 1874, p. 217.

⁷⁴ HALFMANN 1986, p. 231; KRÓLCZYK 2015, p. 141.

⁷⁵ HDN 6.4.3.

⁷⁶ HDN 6.5.5–7.

⁷⁷ HDN 6.5. 9–10; KRÓLCZYK 2015, p. 142.

⁷⁸ HDN 6.6.2–3.

⁷⁹ HDN 6.7.2–5.

⁸⁰ ZIÓŁKOWSKI 2008, p. 273.

dition concluded with a marginal victory for the Persians. Surprisingly, despite their successes, Ardashir I and his forces did not capitalize on their gains, resulting in a state of peace on the eastern Roman frontiers. Despite the absence of a decisive victory, Severus Alexander declared himself the victor.⁸²

Moesia Inferior

Simultaneously, C. Messius Q. Decius Valerianus⁸³ assumed the role of governor of Moesia Inferior. According to epigraphic sources, his *legatio* spans from the end of 232 or the beginning of 233 CE. Recognizing the escalating challenges at the Empire's frontiers the emperor appointed C. Messius Q. Decius Valerianus to oversee Moesia Inferior and mandated a province-wide reorganization.⁸⁴ This undertaking is well-documented in inscriptions; aside from constructing new fortifications, the governor implemented a comprehensive program to reconstruct roads and bridges (*pontes derutos et vias conlapsas restituit*) (Fig. 1).⁸⁵

The construction of a new fort situated approximately 20 km northwest of Municipium Montanensium commenced no earlier than the spring of 233 CE. The fort was garrisoned by the cohors Gemina (milliaria) (?) Dacorum Alexandriana.⁸⁶ A slab with a building inscription, likely belonging to one of the structures erected in the recently established fort, has been identified. This monument is presumed to have originally been situated at the main gate or within the headquarters building. According to Nicolay Sharankov, it was initially believed that this new unit was formed either in 231–232 CE to take part in the Persian campaign or in 232–233 CE to safeguard the regions of province Moesia Inferior.⁸⁷ The Montana region held strategic significance due to mining activities and an important road junction. The absence of evidence in epigraphic sources regarding the participation of soldiers from Lower Moesian legions and auxiliary units in Severus Alexander's Persian expedition leads me to infer that the formation of these units was likely associated with the security of the frontiers of the province of Moesia Inferior. Herodian repeatedly references soldiers from Illyricum.⁸⁸ However, if we consider the *vexillationes* of the Danube provinces as the foundation of Severus Alexander's army, there is a conspicuous absence of information regarding the units from Lower Moesia.⁸⁹ According to Zygmunt Haszczyc, the military force under the emperor's command comprised a minimum of eleventh legions, supplemented by a suitable contingent of auxiliary troops.⁹⁰ However, does not specify the composition of these units or the rationale behind his assertion.

During the governorship of C. Valerius Q. Decius Valerianus, construction initiatives were underway along provincial roads, as indicated by two milestones set up between December 10, 233 CE, and December 9, 234 CE (Fig. 2). These milestones were uncovered in proximity to the roads linking Marcianopolis with Durostorum and Tropaeum Traiani.⁹¹ Archaeological findings reveal that the roads originating from Marcianopolis extended towards key urban and military centers, including Melita, Nicopolis ad Istrum, Durostorum, and Odessos. The route from

⁸¹ HDN 6.7.2–5.

⁸² KRÓLCZYK 2015, pp. 145–146.

⁸³ *PIR*² D 28.

⁸⁴ SHARANKOV 2020, pp. 318–319.

⁸⁵ Building inscription: *CIL* III 14211, 1 = III 12382 = *AE* 1905, 218. Milestones: *CIL* III 12519 = *AE* 1895, 56 (Paskalevo) and *CIL* III 13758 (Shtipsko).

⁸⁶ The unit identified in the inscription text is further confirmed in a subsequent inscription discovered at the

same location, referred to as cohors Gemina Dacorum Gordiana (milliaria) (*CIL* III 14211).

⁸⁷ SHARANKOV 2020, p. 312.

⁸⁸ HDN 6.4.3; 6.2; 7.3.

⁸⁹ About the units participating in the *expeditio Persica*, see KRÓLCZYK 2013, pp. 16–27; WIEGELS 2014, pp. 97–100.

⁹⁰ HASZCZYC 1975, p. 205.

⁹¹ SHARANKOV 2020, p. 318, footnote 58.

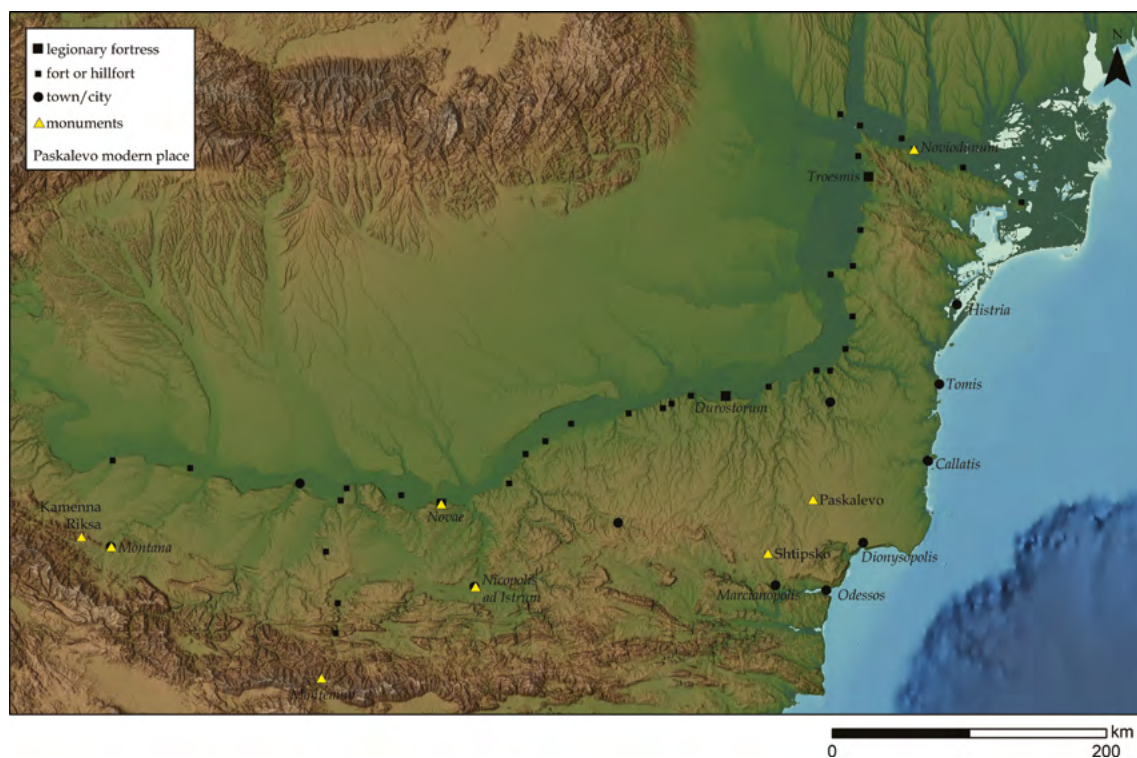


Fig. 1. Moesia Inferior. Monuments related to the governor of the province of Lower Moesia, C. Messius Q. Decius Valerianus (prepared by A. Gizińska, basemap from NOAA National Centers for Environmental Information (NCEI) via ArcGIS Online)

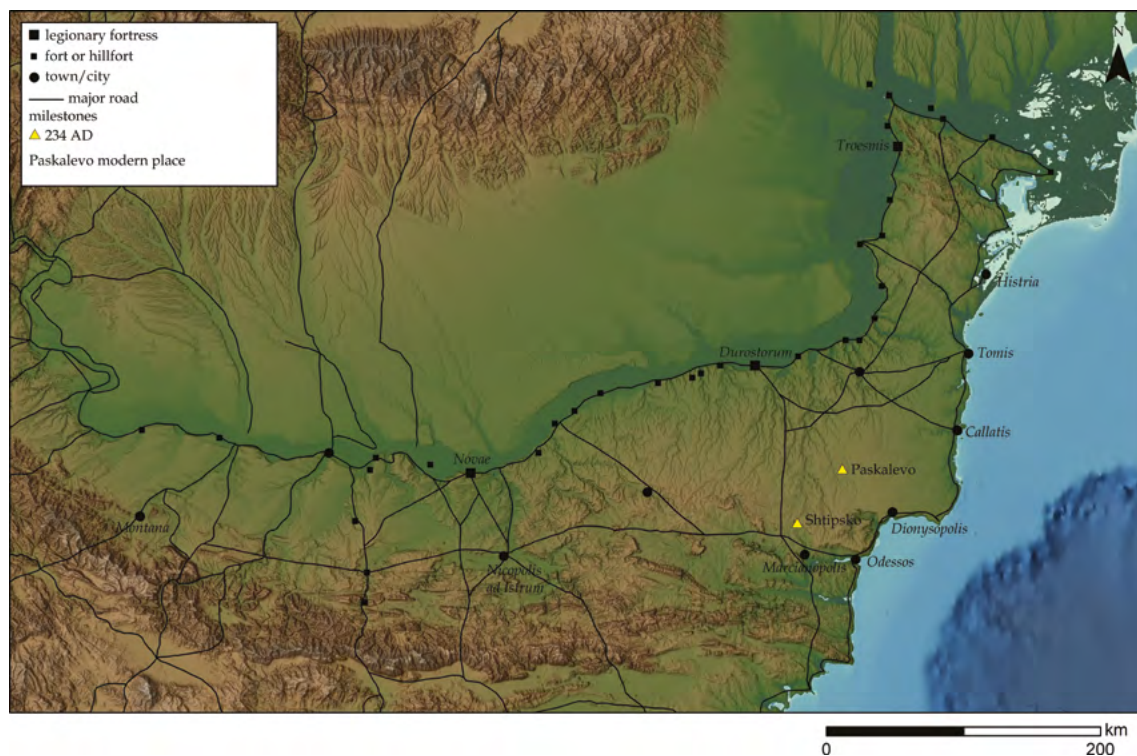


Fig. 2. Moesia Inferior. Milestones set up during the reign of Severus Alexander (prepared by A. Gizińska, basemap from NOAA National Centers for Environmental Information (NCEI) via ArcGIS Online)

Durostorum to Marcianopolis served as a segment of a broader artery leading to Anchialos. This alignment is substantiated by an ancient itinerary, the *Tabula Peutingeriana*,⁹² which designates the section between Marcianopolis and Anchialos as one of primary strategic importance.⁹³

The first milestone was found in Shtipsko, and archaeological investigations have revealed that in ancient times, this site was traversed by the road from Durostorum to Marcianopolis.⁹⁴ Fragments of this road were examined during archaeological excavations,⁹⁵ and even as far back as the 1950s, remnants of the road were visible in the village.⁹⁶ According to Boris Gerov, this road, connecting Durostorum on the Danube with Marcianopolis in the province's interior, naturally evolved into one of the most crucial routes in the region.⁹⁷ In addition to the monument dating from the reign of Severus Alexander, another one dating from 293–305 CE was discovered in the area.⁹⁸ This later monument provides information about the distance of XI millia passuum, corresponding to the distance between the locations where monuments were found and Marcianopolis.⁹⁹

The second monument was unearthed in the present-day village of Paskalevo, located approximately 70 km north of Marcianopolis and roughly 66 km south of Tropaeum Traiani.¹⁰⁰ This milestone provides evidence of construction activities carried out along a section of one of the province's secondary roads, which branched off from the main thoroughfare connecting Marcianopolis and Tropaeum Traiani.¹⁰¹ In the vicinity of Tropaeum Traiani, there was a road stretching across Dobruja from south to north, commonly referred to as the central road. Fragments of this road are discernible in satellite and aerial photographs taken near Tropaeum Traiani.¹⁰²

The usage of Severus Alexander's name and title in the nominative case implies that the roadwork was conducted under the direct authority of the emperor himself,¹⁰³ signaling his role as the overseer of the renovation or reconstruction efforts.¹⁰⁴

Imperial visit in Moesia Inferior

The visit of Severus Alexander and his mother, Iulia Mamaea in the province is dated to the early months of 234 CE. Following his return from the East the emperor visited Lower Moesia. This is substantiated by the discovery of an altar in Montemno, situated on the border of Thrace and Moesia Inferior.¹⁰⁵ The monument was discovered in close proximity to the highest point along the road connecting Oescus to Philippopolis. It was positioned at Montemno, a *statio* recognized from the *Tabula Peutingeriana*, and a fortified military post (*praesidium*). Historically, this road traversed through the mountains and represents a crucial connection between Thrace and Moesia Inferior. The dedication was made to Jupiter, as well as other deities, the Genius loci, and the deities of the Haemus mountains (*praesides Haemi montis*) to celebrate the joyful arrival of Severus Alexander and his mother, Iulia Mamaea. The altar was set up by the governor of the province, C. Messius Q. Decius Valerianus. During this visit, the emperor probably conducted an inspection to assess the effectiveness of the governor's efforts in securing the provincial frontiers.¹⁰⁶

⁹² TORBATOV 2000, p. 60.

⁹³ BEŠEVILIEV 1969, p. 485.

⁹⁴ *CIL* III 13758 = *AE* 2001, p. 1736.

⁹⁵ TORBATOV 2000, p. 65–67.

⁹⁶ MIRČEV, TONČEVA 1956, p. 74.

⁹⁷ GEROV 1975, p. 51.

⁹⁸ *CIL* III 142151.

⁹⁹ TORBATOV 2000, p. 62.

¹⁰⁰ *CIL* III 12519.

¹⁰¹ PANAITE 2012, p. 75.

¹⁰² PANAITE, MIU 2016, pp. 207–208 and footnote 98.

¹⁰³ BĂRBULESCU, CÂTEIA 1998, p. 123.

¹⁰⁴ GIZIŃSKA, forthcoming.

¹⁰⁵ *CIL* III 13724 = *ILBulg* 264.

¹⁰⁶ SHARANKOV 2020, pp. 318–319.

The inscription, along with the suggested visit of Severus Alexander to Lower Moesia, appears to pose a contradiction with established written records. The biography *vita Alexandri Severi* under the fictitious name Aelius Lampridius, provides an account of the emperor's triumph in Rome, celebrating his victory over the Sassanids.¹⁰⁷ Scholars widely concur on the timing of this event, with near unanimity indicating that the emperor arrived in Italy during the late summer of 233 CE.¹⁰⁸ In the *vita Alexandri Severi*,¹⁰⁹ it is recorded that the emperor was scheduled to commemorate his triumph on September 25, the seventh day before the October kalends.

However, it is reasonable to infer that Severus Alexander did not, in fact, observe the triumph on September 25, 233 CE in Rome. This assumption is supported by the understanding that he was not present in Italy during that period and had not yet returned.¹¹⁰ In the SHA, only the daily and monthly dates are provided, without explicit mention of the year. The assignment of the year 233 CE is a deduction made by contemporary scholars. Werner Eck's comprehensive analysis conclusively demonstrates that from 232 to 235 CE, the title of *proconsul* consistently features in the imperial designation. The title of *proconsul* is notably absent from all imperial decrees issued between 222–231 CE.¹¹¹ It is presumed that during this period, the emperor remained primarily in Rome and Italy. The title reemerges solely in military diplomas issued from the start of January 232 CE.¹¹² This means that the emperor travelled directly from the East to Germania.¹¹³ This is further confirmed by Herodian himself, who mentions that upon receiving reports of Germanic crossings over the Rhine and Danube,¹¹⁴ the emperor immediately ordered his troops to march. He left some forces to defend the eastern frontier and proceeded with the remainder against the Germans.¹¹⁵ Severus Alexander was expected to reach the Rhine by the autumn of 234 CE.

The legate of the legio I Italica, Fonteius Maximus, erected a monument on May 1, 233 CE, most likely in connection with Severus Alexander's "victory" over the Sassanids or his visit to Moesia Inferior.¹¹⁶ The preserved text constitutes the final part of the dedication; however, it is likely that the remaining portion of the inscription was located on another plate or plates. According to T. Sarnowski, this fragment is believed to be the faceplate of the plinth of an equestrian monument of Severus Alexander, situated in the courtyard of the headquarters building.¹¹⁷

A statue base¹¹⁸ erected by the governor of Moesia Inferior, most likely related to the visit of Severus Alexander and his mother in Danubian provinces, is known from Noviodunum.¹¹⁹ It cannot be ruled out that it was related to the end of the Persian campaign. A similar honorific inscription is known from Nicopolis ad Istrum. C. Messius Q. Decius Valerianus also erected the statue base.¹²⁰

A monument identified in Montana was also set up by C. Messius Q. Decius Valerianus, presumably dedicated during his tenure as governor of Moesia Inferior when he was also appointed governor of Lower Germania.¹²¹ This is evident from the inscription's wording, which refers to him as *legatus Augusti pro praetore provinciarum Moesiae itemque Germaniae inferiorum*. C. Messius Q. Decius Valerianus erected the monument upon his assignment to Germania Inferior. Montana is situated near the western border of the province of Moesia Inferior. According to Nicolay Sharankov, the favorable outcomes of the reorganization of the province overseen by C. Messius Q. Decius Valerianus led to his appointment as the governor of Lower Germania.

¹⁰⁷ HA *Alex. Sev.* 56–57.

¹⁰⁸ HOPKINS 1907, p. 235; HALFMANN 1986, p. 252; KRÓLCZYK 2015, p. 27; KIENAST, ECK, HEIL 2017, p. 171.

¹⁰⁹ HA *Alex. Sev.* 56.

¹¹⁰ ECK 2019, p. 266.

¹¹¹ ECK 2019, pp. 259–261.

¹¹² RMD V 471a–b = AE 2001, 2160.

¹¹³ ECK 2019, pp. 264–268.

¹¹⁴ HDN 7.7.2.

¹¹⁵ HDN 6.7.5–6.

¹¹⁶ IGLNovae 71 = ILNovae 50 = AE 1987, 862.

¹¹⁷ SARNOWSKI 1989, pp. 97–120.

¹¹⁸ AE 1977, 761 = ISM V 269.

¹¹⁹ SHARANKOV 2020, p. 318.

¹²⁰ IGBulg II 640.

¹²¹ AE 1985, 752.

This event is likely connected to the emperor's preparations for the Germanic expedition taking place in 234–235 CE.¹²² If the unveiling of the monument and the emperor's visit to Moesia Inferior occurred in early 234 CE, then Severus Alexander, along with C. Messius Q. Decius Valerianus, the newly appointed governor of Germania Inferior, would have had sufficient time to reach the Rhine by the autumn of 234 CE. What is intriguing, the epithet *invictus* is inscribed on the monument. This epithet first appeared in epigraphic sources as early as 230 CE. However, it gained broader significance when added to the imperial title during the immediate lead-up to the expedition against Ardashir I. This is evident from inscriptions carved on milestones dating back to 231 CE, which likely commemorate victories over the Persians.¹²³

Summary

The final years of Severus Alexander's reign witnessed escalating unrest along the frontiers of the Roman Empire. These challenges compelled the emperor to take decisive measures to safeguard the frontiers. In Lower Moesia, a notable instance of imperial intervention in the province was the initiatives led by C. Messius Q. Decius Valerianus. Under his direction, substantial investments were allocated to the construction of new fortifications and the restoration of crucial roadways within the region.¹²⁴

Epigraphic sources provide evidence of an imperial visit to Moesia Inferior in 234 CE. The emperor's itinerary likely took him from Antioch to Byzantium, proceeding through Thrace. Near the Trojan Pass and *praesidium* at Montemno, he crossed the border between Thrace and Lower Moesia, where he met with C. Messius Q. Decius Valerianus. The province Thrace was traversed by the major Roman road, *via Egnatia*.¹²⁵ The visit may have been related to an inspection aimed at assessing the governor's handling of the province's reorganization efforts and then with his appointment as governor of Lower Germania. This action by Emperor Severus Alexander indicates his appreciation for the governor's effective administration and reorganization of the province of Moesia Inferior, particularly during a period when the Empire faced a burgeoning crisis. It appears that the governor had earned the emperor's trust, as evidenced by his selection to address another major challenge—the Germanic expedition. Additionally, it is worth noting that if C. Messius Q. Decius Valerianus had indeed awaited the emperor's arrival at the province's border, he might have received prior notice of the emperor's readiness to journey westward. This would indicate that other inscriptions from Moesia Inferior commemorate a visit that *de facto* did not have to take place.

Profectio (or *adventus*) monetary emissions are documented from Tomis, indicating that minting may have occurred during Severus Alexander's potential visit to the city, possibly upon

¹²² SHARANKOV 2020, p. 319.

¹²³ KRÓLCZYK 2015, p. 150.

¹²⁴ Some parallels can be drawn regarding the appointment of specific individuals and the initiation of particular projects in the provinces during the last years of Severus Alexander's reign, such as the career of Rustilius Pudens Crispinus (*PIR*² R 257). He is mentioned on 14 milestones from Thrace (*IGBulg* III,1 897; *IGBulg* III,1 898; *IGBulg* III,1, 1372; *IGBulg* III,1 1382; *IGBulg* III,2 1697; *IGBulg* III,2 1704; *IGBulg* III,2 1827; *IGBulg* IV 1982a; *IGBulg* IV 2021; *IGBulg* IV 2040; *AE* 1978, 726 = *IGBulg* V 5604; *AE* 1992, 1511; *AE* 1995, 1371), suggesting his involvement in road construction projects

within the province. Indicating a possible connection to Emperor Severus Alexander's Persian campaign (GERASIMOVA-TOMOVA, HOLLENSTEIN 1978, p. 113). Furthermore, by 232/33 CE at the latest, Crispinus was appointed as the governor of the province of Syria Phoenicia. As highlighted by Danuta Okoń, this appointment must have been significant in Crispinus's career, as it likely involved his participation in the war with Persia and solidified his close association with the emperor (OKOŃ 2012, p. 209).

¹²⁵ Helmut Halfmann suggests that Severus Alexander opted for the *via Egnatia* as his route eastward in 231 CE (HALFMANN 1986, p. 231).

his return from the East.¹²⁶ The approximate date of issue of these coins is 231–235 CE.¹²⁷ However, there is no specific information confirming the emperor's presence there at that time.¹²⁸ It is also theoretically plausible that he traveled from the East to Moesia Inferior through the *Pontus Euxinus*, eventually reaching Tomis and then to the western border of Moesia Inferior. This hypothesis could provide an explanation for the road repairs conducted in the vicinity of present-day Paskalevo and Shtipsko. Utilizing the roads, one could travel from Tomis to the vicinity of Marcianopolis, from where both milestones are known. Parallel to the *limes* road, an interior route within the province connected Black Sea coast – Odessos – Marcianopolis – Nicopolis ad Istrum – Melta – Montana and Bononia.¹²⁹ Roman roads were built for a variety of purposes, including military, economic and political,¹³⁰ however, road repairs were not always motivated solely by technical reasons, as the concentration of milestones in a particular area within a short period of time could be associated with the planned visit of the emperor.¹³¹

In the beginning of the third century CE, or at least in the first half of the third century CE the responsibility for military deployments in Crimea was primarily shouldered by a *vexillatio* consisting mainly of soldiers from the legio XI Claudia.¹³² At the beginning of the third century CE, there was a change in the garrison at Tyras, with the introduction of the aforementioned unit. Evidence suggests that officers and soldiers from the legion were present also in Chersonesus,¹³³ Balaklava,¹³⁴ and Cape of Ai-Todor.¹³⁵ During the reign of the Severan dynasty, stamped building materials bearing the stamps of the legio XI Claudia were discovered in both Chersonesus and its *chora*, including Balaklava, Kazackaja, Cape of Ai-Todor, and Alma Kermen.¹³⁶

Both Chersonesus, Balaklava, and the Cape of Ai-Todor were abandoned at the end of the Severan dynasty. Nearby outposts, which were predominantly manned by soldiers from the legio XI Claudia, were also deserted during this period.¹³⁷ The exact date of the Roman garrison's departure from these places is unknown. It is speculated that this occurred in the mid-third century CE.¹³⁸ With the end of Severus's reign, the army withdrew from Taurica. However, it remains unclear whether this withdrawal extended to garrisons in cities such as Tyras and Olbia.

It is likely that Lower Moesian units did not participate in Severus Alexander's Persian campaign, or at least epigraphic sources do not confirm their involvement.¹³⁹ The absence of Moesian units in the *expeditio Persica* could indeed be linked to threats posed by barbarian tribes. This hypothesis may be supported by the activities of C. Messius Q. Decius Valerianus in the province, including extensive efforts related to its reorganization, as well as the expansion of baths in Sexaginta Prista, which may indicate an increase in the number of soldiers stationed at the fort.

It is conceivable that the withdrawal of soldiers from the northern Black Sea region (Tyras, Chersonesus, etc.) was not coincidental but rather driven by security considerations. Lower

¹²⁶ Type *profectio* or *adventus*: AMNG no. 3253; VARBANOV 2005, no. 5423 and 5427. Type trophy with prisoners: AMNG no. 3255 and 3272; VARBANOV 2005, no. 5411.

¹²⁷ BELDIANU 2019, pp. 315–316.

¹²⁸ ISM II 92 (58) = AE 2016, 6 = ISM VI.2 92; STOIAN 1962, 108–109, no. 12. From Tomis, there is an altar erected by the council and the citizens with a dedication to Iulia Mamaea. Iorgu Stoian (STOIAN 1962, pp. 108–109, no. 12) was of the opinion that the monument was set up in connection with the unrest on the frontiers of the Empire that emerged in the final years of Severus Alexander's reign. However, there is no direct information about an imperial visit to Tomis.

¹²⁹ PANAIT 2012, p. 73; PANAIT 2015, p. 596.

¹³⁰ WIELOWIEJSKI 1984, p. 61.

¹³¹ KOLENDO, ŻELAZOWSKI 2003, p. 131.

¹³² SARNOWSKI 1988, p. 144.

¹³³ ZUBAR' 2000, pp. 249–251.

¹³⁴ KARASIEWICZ-SZCZYPIORSKI 2015, p. 75. In the early third century CE, the fort underwent expansion, and the Roman military presence in Crimea was reinforced during the reign of Septimius Severus.

¹³⁵ ZUBAR' 1998, p. 118; SARNOWSKI 2006; KARASIEWICZ-SZCZYPIORSKI 2015, pp. 103–104.

¹³⁶ SARNOWSKI 2000, pp. 219–224; SARNOWSKI 2006, p. 98.

¹³⁷ KARASIEWICZ-SZCZYPIORSKI 2015, pp. 36, 164–66.

¹³⁸ SON 1993, p. 53.

¹³⁹ KRÓLCZYK 2013, pp. 16–27; WIEGELS 2014, pp. 97–100.

Moesia, facing threats from barbarian tribes, underwent reorganization under the provincial governor, possibly necessitating an increase in military personnel. This could explain the secondment from the aforementioned areas. It is likely that the *vexillationes* were withdrawn from Taurica and possibly from Tyras (and Olbia?) to reinforce military garrisons along the Danube, including those at Sexaginta Prista. These movements reflected the policies prevailing during the increasingly incompetent reign of Severus Alexander. While Lower Moesia was secured in the short term, the situation ultimately led to disastrous consequences in the following decades.

The last years of Severus Alexander's reign and the situation in Moesia Inferior from 230 to 235 CE can thus be summarized as:

- Severus Alexander commissioned C. Messius Q. Decius Valerianus with the reorganization of the province. Under his governance in Moesia Inferior, various projects were undertaken, including the construction of roads and bridges, as well as the fortification of new structures.
- Emperor Severus Alexander and his mother made a visit to the province of Moesia Inferior in 234 CE, as evidenced by an altar found in Montemno. This visit, along with the title of *proconsul*, contradicts the notion presented in written sources such as the *Historia Augusta* and the late Roman historian Festus, which suggest that the emperor triumphed in Rome in 233 CE.
- *Vexillationes* composed primarily of soldiers and officers from the legio XI Claudia were withdrawn from areas along the northern coast of the Black Sea and outposts situated *extra fines Imperii*. Simultaneously, there is a possibility that a portion of the army was also withdrawn from the cities of Tyras and Olbia (which had been part of the province of Moesia Inferior since the reign of Septimius Severus). This withdrawal left the cities vulnerable and contributed to their susceptibility to initial invasions by barbarian tribes.
- The construction activities within the garrison baths in Sexaginta Prista might have been connected to either the enlargement of the stationed garrisons or the anticipated expansion of the garrison itself. It is likely that the detachments of the legio XI Claudia were secondment to the lower Danube from northwestern part of Black Sea towards the end of Severus Alexander's reign. Building materials stamped with stamps of the legio XI Claudia are known from Sexaginta Prista.¹⁴⁰
- The invasion of barbarian tribes into the province of Moesia Inferior appears to have been neither a singular nor unexpected event. While their large-scale incursions are recorded from 238 CE onwards, archaeological evidence suggests that these incursions may have commenced in the final years of Severus Alexander's reign.
- There are no epigraphic sources validating the involvement of the Moesian legions in Severus Alexander's Persian campaign. The absence of *vexillationes* from Moesia Inferior suggests that the precarious situation within the province and the unrest along its frontier precluded the possibility of deploying troops alongside the emperor in the East.

Abbreviations

<i>AE</i>	<i>L'Année épigraphique</i> , Paris.
AMNG	Die antiken Münzen Nord-Griechenlands, Vol. 2, eds. B. PICK, K. REGLING, Berlin 1910.
<i>CIL</i>	<i>Corpus Inscriptionum Latinarum</i> , ed. Th. MOMMSEN <i>et alii</i> , Berlin 1863–

¹⁴⁰ *AE* 1944, 6; *AE* 1944, 7; *AE* 1944, 8 = *CIL* III 12527; *AE* 1944, 9.

<i>IGLNovae</i>	J. KOLENDO, V. BOŽILOVA, <i>Inscriptions grecques et latines de Novae (Mésie inférieure)</i> (= <i>Ausonius – Publications. Mémoires</i> 1), Bordeaux 1997.
<i>ILBulg</i> <i>ILNovae</i>	B. GEROV, <i>Inscriptiones Latinae in Bulgaria Repertae</i> , Serdicae 1989. V. BOŽILOVA, J. KOLENDO, L. MROZEWICZ, <i>Inscriptions latines de Novae</i> , Poznań 1992.
<i>IOSPE I²</i>	B. LATYŠEV, <i>Inscriptiones antiquae Orae Septentrionalis Ponti Euxini. Inscriptiones Tyrae, Olbiae, Chersonesi Tauricae aliorum locorum a Danubio usque ad regnum Bosporanum</i> , second edition, Petropoli 1916.
<i>ISM II</i>	<i>Inscriptiile antice din Dacia și Scythia Minor. 2. Inscriptiile din Scythia Minor grecești și latine. 2. Tomis și teritoriul său</i> , ed. I. STOIAN, București 1987.
<i>ISM V</i>	<i>Inscriptiile antice din Dacia și Scythia Minor. 2. Inscriptiile din Scythia Minor grecești și latine. 5. Capidava, Troesmis, Noviodunum</i> , ed. E. DORUȚIU-BOILĂ, București 1980.
<i>ISM VI.2</i>	<i>Inscriptions grecques et latines de Scythie mineure. Volume 6. Suppléments. Fascicule 2, Tomis et son territoire</i> , eds. A. AVRAM, M. BĂRBULESCU, L. BUZOIANU, București 2018.
<i>RMD V</i>	P. A. HOLDER, <i>Roman Military Diplomas V</i> , London 2006.

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Adrianna Gizińska
 Polish Centre of Mediterranean Archaeology
 University of Warsaw
 ak.gizinska@uw.edu.pl
<https://orcid.org/0000-0003-4712-0299>

Adam Jakub Jarych

THE SILVER MOUSE FROM NOVAE¹

Abstract: This article describes a silver mouse figurine found in the military camp at Novae in 2023, an intriguing example of ancient art. In Antiquity, mice carried rich symbolism and were depicted in religious, decorative, and even funerary contexts, not always connected with the cult of Apollo Smintheus. Such figurines were often used as lamp ornaments, gaming pieces, pendants, or furniture fittings. Owing to its state of preservation, material, and possible function, the Novae mouse merits attention in further research.

Keywords: mice, silver, Novae, lamps

Mice enjoyed a certain degree of popularity in the ancient world as a motif used in literature, art, and numismatics, both in Greece and in Rome.² It is enough here to mention the short heroicomic poem *Batrachomyomachia*—wherein they were the main protagonists of the clash, together with frogs—or the fables of Aesop.³ These rodents were also depicted on coins, for instance in Metapontum,⁴ Alexandria Troas,⁵ and on Roman denarii,⁶ as well as on mosaics and gems.

Mice were also associated with Apollo, who was given the epithet Smintheus, and whose sanctuary was located in Hamaxitus (Chryse), where, according to tradition, these animals were fed.⁷ Ancient accounts mention that this god was perceived, on the one hand, as the ruler presiding over rodents, and on the other, as a protector against the plague they carried.⁸ The mice that gathered in his shrine were themselves considered sacred. According to Strabo, the statue of Apollo in this temple, made by Scopas, was crafted in such a way that the god rested one foot on a mouse.⁹

It is therefore no surprise that for decades almost all figurines of mice found in museum collections were linked with the cult of Apollo. In many cases these objects were made of bronze

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² Ruzić 2017, pp. 129–140.

³ Lesky 1971, p. 111. It was once believed that the *Batrachomyomachia* was composed in the sixth or fifth century BCE; today, however, this date is shifted to the Hellenistic Period.

⁴ BMC 123 (340–330 BCE). The obverse of this coin depicts the head of Demeter; the reverse, centrally, shows an ear of barley on which a mouse is sitting.

⁵ Staatliche Museen zu Berlin, Münzkabinett (inv. no. IKMK 18244924); Kiernan 2014, p. 605.

⁶ RRC 378/1b.

⁷ Strab. 13.1.48; Kiernan 2014, p. 604. According to Strabo, the cult statue of the god was accompanied by depictions of mice.

⁸ Hom. *Il.* 11. 37–39.

⁹ Strab. 13.1.48.

¹⁰ The largest number of specimens (15) is held in the collections of the British Museum.

and lacked any broader archaeological context, having entered museums mainly as a result of purchases or donations.¹⁰ On the other hand, such figurines were also often used as decorative elements, for instance on oil lamps¹¹ or on various types of bronze stands, candlesticks, or shelves, as in the case of a find from Augusta Raurica.¹² They were also used as gaming pieces, fittings, pendants, or finials for handles.¹³

Fortunately, in 2023, another mouse figurine was discovered in the camp of the legio I Italica at Novae (Sector XII),¹⁴ which, given its craftsmanship, material, and state of preservation, deserves scholarly attention. Such small objects are often omitted from excavation reports in favour of more spectacular finds; therefore, every new discovery should be discussed, even if only in a short article.¹⁵

The Novae mouse (Fig. 1) is preserved in its entirety (2.3×1.3 cm) and represents one of the two most popular types of depictions of these rodents in art.¹⁶ The animal is shown standing on its hind legs on a small base, which probably served to attach it to a larger object. In its front paws, it holds a round object, which may be interpreted as a breadcrumb or a nut. The tail is preserved in full and is coiled into a loop. Notable details include clearly marked fur, eyes, snout, and three toes on the front paws. It was found on the outer side of the apse of a large room, which served as the *caldarium* of the baths in the House of Centurion (southern wing) and was dismantled around 238 CE. Although this room had been in use since the 70s–80s CE, we may assume that the figurine was made later, probably at the end of the second century or at the turn of the second and third centuries CE. Given its good state of preservation, it cannot have been in use for a long time.

Stylistically, this depiction is similar to a specimen currently in the British Museum,¹⁷ as well as to a mouse from Labricum, both of which were likewise made of silver. Naturally, examples made from this precious metal are rarer than those cast in bronze. It is enough to note that Philip Kiernan mentioned only three silver figurines, two of which are in British collections, and one described by the eighteenth-century collector Francesco de Ficoroni.¹⁸ This is, however, not the first mouse to be found in Bulgaria; two others come from Chirpan and Beshly.¹⁹ Moreover, it is also not the first depiction of this rodent to be found in a Roman camp, as one such specimen was discovered during archaeological works at Oberstimm.²⁰

In the ancient world, depictions of mice carried rich symbolism, which should be briefly outlined before proceeding to the interpretation of the figurine from Novae. First of all, drawing on the aforementioned study by Kiernan, it must be noted that linking all mouse figurines with the cult of Apollo Smintheus is unfounded. In the Troad, where the sanctuary of this god was located, not a single figurine has so far been discovered. Moreover, the greatest number of such objects, whether as individual pieces or as decorative elements of various artefacts, has been found in Southern and Western Europe, where the cult of Smintheus was not particularly popular.²¹ It is also worth noting that, although this god is mentioned already in the *Iliad*,²² the figurines in question are dated mainly to the Hellenistic and Roman periods (third century BCE–second century CE). Their production was therefore considerably later than the earliest attestation of the cult.²³

¹¹ WALTERS 1914, pl. I 6e.

¹² KAUFMANN-HEINIMANN 1998, p. 131.

¹³ Römermuseum in Augst (inv. no. 1984.27187); EGRI 2015, p. 228.

¹⁴ DYCZEK 2018, pp. 27–71.

¹⁵ EGRI 2015, p. 225.

¹⁶ The second most popular variant depicts mice on all fours. There are also known examples of mice with theatrical masks (British Museum, inv. no. 1876.0510.2) or playing small trumpets.

¹⁷ British Museum (inv. no. 1995.0903.1).

¹⁸ KIERNAN 2014, p. 603.

¹⁹ ILIEVA 1994, p. 221.

²⁰ KIERNAN 2014, p. 618.

²¹ KIERNAN 2014, p. 616. So far, this cult has not been attested in any of the Danubian provinces, although mice themselves have been found in these areas, see SZABÓ 2022.

²² Hom. *Il.* 1. 36–42.

²³ RUŽIĆ 2017, p. 132. Although mice enjoyed greatest popularity from the Hellenistic Period onwards,



Fig. 1. Silver mouse from Novae (inv. no. 38/23; photo: K. Narloch).

Furthermore, depictions of mice do not have to be attributed only to Smintheus. These rodents also appeared on coins of the goddess Ceres. The obverse of *denarii serrati* issued in 81 BCE bears the image of the goddess of fertility, vegetation, and agriculture, while on the reverse there is a ploughman with a team of oxen, and beneath them a mouse sniffing food.²⁴ In this case, the depiction may refer to the goddess herself as the protector of harvests, rather than to the cult of Smintheus. The mouse would then be seen as a symbol of abundance.

In his study on representations of these rodents in art, Mira Ruzić also analysed them in a funerary context, as a symbol of the underworld, as for example on the stele of Quintus Cornelius Zosimus from Viminacium.²⁵ Even these two examples alone challenge the old interpretation linking mice exclusively with the cult of Apollo. Moreover, as already mentioned, such figurines were often used as decorative elements. In the case of lamps, this practice is particularly well-attested and finds some support in narrative sources.

Timotheus of Gaza, writing in Late Antiquity, noted that mice would eat the oil from lamps.²⁶ In the *Batrachomyomachia*, mentioned earlier, these rodents are accused by Athena of making noise and damaging wreaths and lamps while searching for oil in her sanctuary. In the same work, there is also a reference to mice using the lids of these containers to make shields.²⁷

Echoing these literary accounts are mouse figurines placed on lamps—on the bodies, lids, or as handles.²⁸ Given that the Novae specimen also stands on a small base, it may have been

at least two earlier specimens are known from the sixth century BC.

²⁴ RRC 378/1b; Ruzić 2017, p. 136.

²⁵ Ruzić 2017, p. 137.

²⁶ Timoth. *De Anim.* 8.

²⁷ *Batrachomyomachia*, 122–29; 174–180.

²⁸ KIERNAN 2014, p. 615; EGRI 2015, p. 230; VARGA 2015, pp. 188–189; Ruzić 2017, p. 135.

mounted or soldered to a larger object. It is therefore possible that this silver figurine was likewise part of a lamp or its lid. Unfortunately, no other remains were found at the site.²⁹ It is conceivable that, given the precious metal, the lamp was melted down, and the mouse had come loose beforehand. Could it have been used in another way? There is no definitive answer to this question, but the fact that its tail is curled into a loop suggests that the figurine may have been worn as a pendant. If we accept that rodent depictions placed on lamps had an apotropaic function³⁰—warding off real animals from eating the oil—then, in the case of its use as a pendant, it could have protected its wearer, perhaps against diseases transmitted by mice, or served as a symbol of abundance or good fortune.

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Adam Jarych
 Antiquity of Southeastern Europe Research Centre
 University of Warsaw
 a.jarych@uw.edu.pl
 orcid.org/0000-0002-6538-9956

²⁹ As for metal lamps, only three such specimens have so far been discovered in Sector XII. They are, however, made of bronze rather than silver. Two are preserved

in fragments, while one is almost complete, lacking only the lid.

³⁰ KIERNAN 2014, p. 614.

Emil Jęczmienowski

NOVAE DURING THE REIGN OF VALENTINIAN I AND VALENS (364–378)¹

Abstract: The period of Valentinian I and, later, Gratian in the West, and of Valens in the East, ended with the disastrous Battle of Adrianople in 378. However, fourteen years preceding the battle were a period of well-documented investment along the frontiers of the Empire. The results of the building initiatives undertaken by Valentinian in the West are particularly well attested, especially in the Pannonian provinces. The archaeological evidence for construction activity along the frontier of the eastern European provinces ruled by Valens appears considerably more modest, most likely due to the less advanced state of research along this section of the Danube. Nevertheless, the available data allow us to conclude that building works were also carried out along this part of the river.

Novae was one of the most important bases along this section of the frontier. The military continued to play a vital role in Novae during the years 364–378, and imperial authorities placed significant emphasis on ensuring the proper supply of frontier troops. The state of research at Novae is among the most advanced along the Lower Danube. Therefore, it may serve as a point of reference for other forts located along this stretch of the frontier, providing valuable insights into the character and scope of the works undertaken during the reigns of Valentinian and Valens. Certain indications of construction activity have been found in various parts of the site, and their analysis suggests that the focus of these works was primarily on maintaining the existing structures within the walls of the fortress.

Keywords: Novae, Late Antiquity, Valens, Valentinian, Roman Army, Moesia Secunda, Diocese of Thrace, Bulgaria, stamped building materials

The period from 364 to 378 CE was marked by the joint rule of Valens in the East, alongside Valentinian and later Gratian in the West. During this time, large-scale construction projects were undertaken along the Empire's borders—new military bases were built, and existing fortifications were repaired and modernized. These efforts began early in the joint reign of the brother emperors, no later than their first or second year, as evidenced by an imperial constitution issued on 19 June 364 or 365.² This decree, addressed to Tautomedes, *dux* of the border troops in the province of Dacia Ripensis, obligated him to supervise the construction and repair of watchtowers

¹ This paper presents and expands selected observations from the PhD thesis written and defended by the author in December 2024 at the Faculty of Archaeology, Uni-

versity of Warsaw, under the supervision of Agnieszka Tomas, Associate Professor at the University of Warsaw.

² *Cod. Theod.* 15.1.13.

along the frontier section under his command. He was expected to carry it out with the help of the troops under his command and at public expense.

Nevertheless, the building programme of Valentinian and Valens was not limited to watch-towers, as larger bases were also constructed and repaired. The results of this construction policy have been attested archaeologically in many locations; however, they are most prominently documented in the western provinces under Valentinian's rule, particularly along the Pannonian frontier.³ Due to the less advanced state of research, traces of similar fortification works have been identified less frequently along the Danube section of Valens' realm. Novae (Svištov) in Moesia Secunda, located in present-day Bulgaria, constitutes a significant exception, as the state of research there is considerably more advanced than at other bases along the Lower Danube. Novae was abandoned in the early seventh century⁴ and was not subsequently built over or destroyed; thus, it offers an important and comprehensive set of data about Roman activity over the centuries following the establishment of a permanent, long-term garrison in the early 70s.⁵ Although large portions of the site still await to be excavated, the findings from research conducted so far provide important insights into the nature of building activity during Valens' reign. Novae was one of the most important military bases along the Lower Danube, which makes these conclusions particularly important for understanding construction efforts along that section of the frontier during this period.

During Late Antiquity, Novae covered approximately 27 hectares, with the Principate-era legionary fortress occupying 17.99 hectares inside the walls,⁶ while the eastern extension (the so-called annexe) covered probably slightly less than 9 hectares (Fig. 1).⁷ The northern, western, and southern walls of Novae formed three of the original four sides of the legionary fortress, which was characterized by a regularly planned, rectangular layout. The eastern wall was built from scratch during Late Antiquity and its design was partially adapted to the natural topography. It is possible that this wall and the eastern wall of the legionary fortress coexisted for some time, until the earlier structure was dismantled. In my opinion, it is unlikely that the new wall was constructed using stones taken from the dismantled earlier fortification, as this would have caused a dangerous breach in the fortification circuit for an extended period until the new structure was completed.

In the fourth century, Novae remained a base of legio I Italica. According to the *Notitia Dignitatum*, it was the seat of the prefect of the entire legion as well as the prefect of the legion's *pedatura superior*, while the headquarters of the prefect of the *pedatura inferior* was located in Sexaginta Prista.⁸ The section of the ancient document dealing with the Lower Danubian provinces was finally compiled around 395; however, it appears to primarily reflect the state of affairs prior to the Battle of Adrianople in 378.⁹ Due to military reforms of the late third and early fourth centuries, the size of legions was significantly reduced.¹⁰ Novae was not an exception, as its military garrison in the fourth century was significantly smaller than in the second and third centuries. The *intra muros* urban development of Novae during the reign of Valens and Valentinian reflects the character of the fortress during this period (Fig. 1). While some build-

³ SOPRONI 1969; FITZ 1976; SOPRONI 1978; SOPRONI 1985; SOPRONI 1989; SOPRONI 1996.

⁴ SARNOWSKI *et al.* 2012, p. 27.

⁵ LEMKE 2018; TOMAS 2022, p. 10.

⁶ SARNOWSKI, KOVALEVSKAJA, KANISZEWSKI 2006, p. 141.

⁷ TOMAS 2022, p. 13.

⁸ *Not. Dign. Or.* XL 30–32.

⁹ BURY 1920, p. 165; JONES 1964, pp. 347–358; HOFFMANN 1969, pp. 516–519; SARNOWSKI 1985a, p. 126;

ZAHARIADE 1988, pp. 26, 185, 192; SARNOWSKI 2007, p. 25; POULTER 2007, p. 33; WIEWIOROWSKI 2007, pp. 207–208; ĐOKIĆ, SAVIĆ 2017, p. 102.

¹⁰ MOMMSEN 1889, pp. 253–257 = MOMMSEN 1910, pp. 261–263; GROSSE 1920, pp. 34, 42, 53; VÁRADY 1961, pp. 358, 369–371; VÁRADY 1963, pp. 391–406; JONES 1964, pp. 680–682; COELLO 1996, pp. 59–60; TREADGOLD 1995, pp. 44–49, 59; ELTON 1996, pp. 89, 99–100; GOLD-SWORTHY 2004, p. 206; SOUTHERN, DIXON 2014, p. 56.

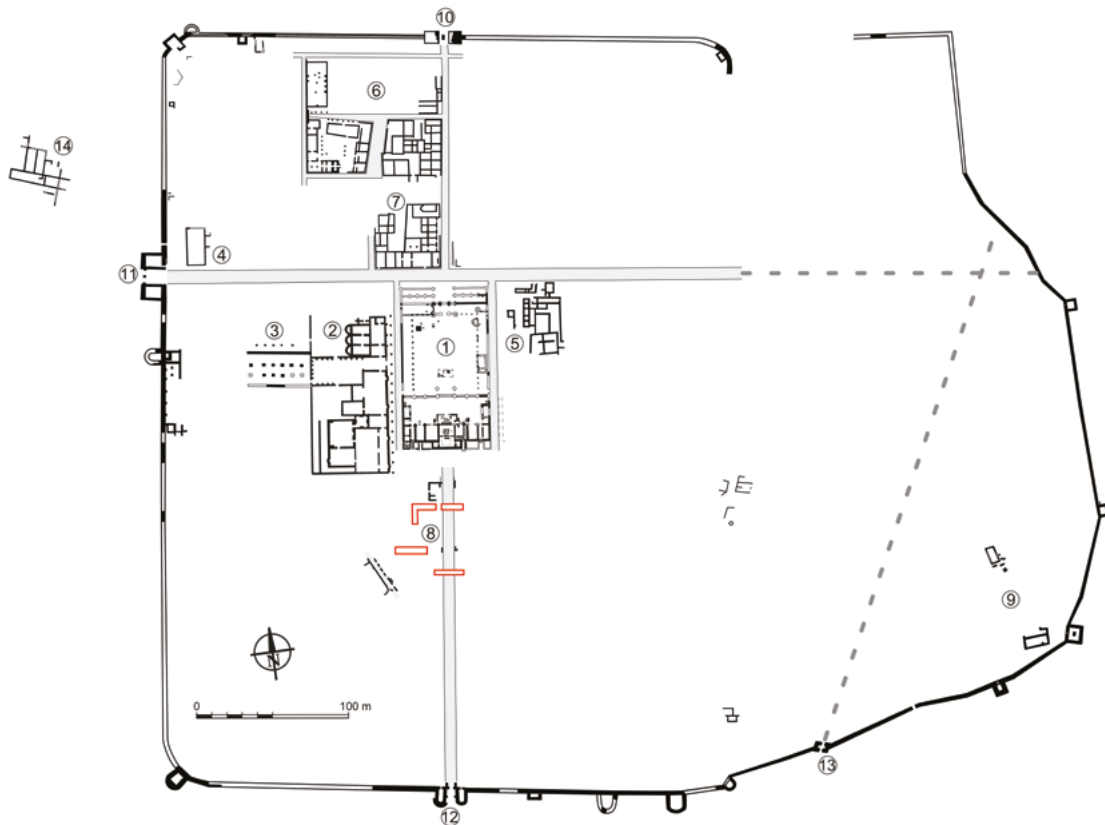


Fig. 1. Novae during the reign of Valentinian and Valens (an outline plan by E. Jęczmienowski, based on a Principate-era plan by T. Sarnowski, J. Kaniszewski, P. Zakrzewski – Sarnowski et alii [kursywa] 2016, p. 178 – and a 5th–6th century outline plan by L. Kovalevskaya, T. Sarnowski – Sarnowski et alii [kursywą] 2012, p. 92, Fig. 1, with detailed plans later added by all expeditions working in Novae).

1: Headquarters building (*principia*), 2: Bath house (*thermae*), 3: Granary (*horreum*), 4: Hall-like building, 5: Residential and economic building, 6: So-called Portico Building and Eastern Villa, 7: Residential building, 8: Currently explored trenches in *retentura*, 9: Economic buildings in annexe, 10: North Gate (*porta praetoria*), 11: West Gate (*porta principalis sinistra*), 12: South Gate (*porta decumana*); 13: Gate-tower; 14: Economic buildings outside the walls. The dashed lines do not indicate streets, but rather axes: the projected axis of the *via principalis* and the axis defined by the orientation of the gate-tower located in the southern part of the annexe

ings seem to have served primarily military and administrative purposes, others were used by civilians for residential and economic activities.

In the western part of Novae, the streets following the two main axes of the legionary fortress remained in use. However, the buildings adjacent to them sometimes differed from the military structures that had occupied this area in the second and third centuries. So far, four buildings from the Principate era that continued to be used in later periods have been discovered along the *via principalis*: a hall-like structure near the West Gate,¹¹ to the north of this street, as well as a granary (*horreum*),¹² baths (*thermae*),¹³ and the headquarters building (*principia*)¹⁴ on the southern side. Additionally, two civilian structures have been identified along the *via principalis*: a building serving both residential and economic purposes to the east of the *principia*,¹⁵

¹¹ GENČEVA, ANDREEVA 2021.

¹² According to the excavators, this building previously served as an arsenal and was rebuilt into a granary ca. 335–340 (KLENINA, BIERNACKI 2023, pp. 448–449).

¹³ BIERNACKI 2016; JASIEWICZ 2016.

¹⁴ SARNOWSKI 1999; SARNOWSKI et alii 2012, pp. 50–59.

¹⁵ DYCZEK 2018, pp. 58–60, 68.

and another residential building to the north of the headquarters, at the intersection with the *via praetoria*, on its western side. The latter was previously interpreted as a public edifice.¹⁶ Further north of this structure, a complex of several residential and economic buildings was constructed above the ruins of the military hospital. The development of the remaining area within the walls of fourth century Novae remains largely unknown. Only a very small portion within the annexe of the fortress to the east has been excavated. The results suggest that in Late Antiquity this area was occupied by civilians and that economic activity took place there.¹⁷

Building activity—archaeological evidence

Unfortunately, archaeological evidence from the fourth century is often ambiguous, making it difficult to precisely date the construction phases of buildings. This issue becomes especially significant when attempting to attribute certain works to a relatively brief period of just fourteen years. So far, no building inscriptions from that period are known from Novae. In fact, only one such piece of epigraphic evidence has been found along the Lower Danube frontier—in Cius (Gârliciu) in Scythia Minor¹⁸—although building inscriptions from that period are quite well attested in other frontier provinces.¹⁹ The most distinctive remains of Valens' building activity in Novae and, more broadly, in Moesia Secunda are bricks and roof tiles stamped with a distinctive signature—RVMORID (Fig. 2). It is most likely that these stamps refer to Flavius Rumoridus, who served as a *magister militum* in 384 and, probably earlier, as a *dux* of Moesia Secunda during the joint rule of Valens and Valentinian.²⁰ He thus held a position analogous to that of the aforementioned Tautomedes from Dacia Ripensis, who was obliged to oversee fortification works along the border during the same period. The mention of a provincial *dux* on a stamp is one of the distinctive elements suggesting the production of the bricks during the reign of Valens and Valentinian. Similar bricks bearing the stamps FRIGERIDVSVPDVX are known from Pannonia²¹ and are almost certainly linked to Frigeridus, *dux* of Pannonia Valeria, known from Ammianus Marcellinus' *Res Gestae*, where he is mentioned in the context of events from the year 377.²² The mention of a provincial *dux* on the stamped bricks indicates that he ordered their production and was thus responsible for the construction works, which aligns perfectly with the mentioned imperial constitution. At the same time, we can suppose that these bricks were produced by the border troops under the command of the *dux* and that they were engaged in construction works, as stated in the constitution. A significant clue comes from similarly dated stamped bricks from Dacia Ripensis,²³ which are not only far more numerous, but also frequently bear the name of the

¹⁶ SARNOWSKI *et al.* 2012, p. 92, Fig. 1:7; GENČEVA 1999, pp. 95–96.

¹⁷ TOMAS 2017, p. 57; TOMAS 2019, p. 237; TOMAS 2020, pp. 680–681.

¹⁸ CIL III 6159 = 7494; IGLR 233.

¹⁹ Esztergom (CIL III 3653 = RIU III 771 = AE 1999, 1264; FITZ 1976, p. 49; SOPRONI 1985, pp. 109–110); Visegrád-Lepence (GRÓF, GRÓH 1999; AE 2000, 1223; GRÓF, GRÓH 2001); Visegrád-Steinbruch (RIU III, 804; SOPRONI 1978, p. 53; SOPRONI 1989, pp. 108–109); Esztergom-Hideglelőskereszt (CIL III 10596 = ILS 762 = RIU III 770 = AE 1941, 12; SOPRONI 1978, p. 29; SOPRONI 1985, pp. 107–109; SOPRONI 1989, pp. 105, 108; LE BOHEC 1991, pp. 325–326); Ybbs an der Donau (CIL III 5670a; GASSNER, PÜLZ 2015, p. 192); Etzgen (CIL XIII

11538 = AE 1893, 114 = AE 2002, 1051 = HÄCHLER, NÄF, SCHWARZ 2020, p. 258); Koblenz (CIL XIII 11537 = AE 1908, 142; HÄCHLER, NÄF, SCHWARZ 2020, pp. 256–257); Aswan (AE 1908, 235 = AE 1909, 108 = BERNAND 1990 = AE 1998, 1470; HONZL 2020, pp. 103–104); Umm el-Jimal (three inscriptions: (1) ATALLAH 1996, pp. 19–20; AE 1996, 1613; (2) ATALLAH 1996, pp. 15–17; AE 1996, 1612; SCHARF 2001, p. 191; (3) CIL III 88, SCHARF 2001, p. 190).

²⁰ SARNOWSKI 1985a, pp. 124–125; IVANOV 2002, pp. 30, 124; OPRIS 2020, pp. 14–15; DUCH 2017, p. 114.

²¹ SOPRONI 1978, pp. 31, 65, 72, Taf. 8, 71.

²² Amm. Marc. 31.7.3–5, 31.9.

²³ SARNOWSKI 1985a, pp. 124–125; VASIĆ 1997, pp. 176–176.



Fig. 2. RVMORID-type stamped brick from Novae (photo by E. Jęczmienowski)

province and the toponyms of fortresses along the border, suggesting that their garrisons could have been responsible for producing the materials.

Therefore, the analysis of building activity from that period at Novae cannot be undertaken without considering the stamped ceramic building materials. However, it is important to keep in mind that bricks and roof tiles were often reused in later periods, so the discovery of such materials produced between 364 and 378 does not necessarily indicate that the construction work was carried out during that time and at the same location where they were found. Nevertheless, in Novae, roof tiles and bricks bearing the stamp RVMORID have been found in multiple locations,²⁴ and traces of construction activities undertaken during that period have indeed been recorded.

Some of the clearest examples come from the *principia* building, which, during the reign of Valens, still served as the administrative centre of Novae (Fig. 1:1; Fig. 3:1). There were three main phases of its construction: during the reigns of Vespasian, Trajan, and the Severan dynasty in the early third century.²⁵ The headquarters measured 58.75×106 m (approximately 6200 sq. m)²⁶, and RVMORID-type stamped bricks were used to construct a hall in the western part of its northern portico.²⁷ The 129 m² building was placed within the intercolumniation, and its precisely built walls (approximately 0.6 m thick) were composed of bricks and stones bonded with clay.²⁸ The building measured 19.5×7.7 m, excluding the apse, which had a radius of 2 m and was built on the eastern side.²⁹ This structure may have served as a meeting place. It is plausible that the division of the *aedes principiorum* into two sections also occurred during the reign of Emperor Valens.³⁰ The discovery of a brick marked with a RVMORID-type stamp within one of the adjacent *aeraria* (specifically, the western room, referred to as room Fz)³¹ suggests that renovations in that sector of the headquarters were carried out during this period.

²⁴ DIMITROV *et al.* 1970, p. 66; IVANOV 1997, pp. 560–562; SARNOWSKI 1999, pp. 58–59; VLADKOVA 2003, p. 227; SARNOWSKI *et alii* 2012, p. 52.

²⁵ SARNOWSKI *et alii* 2012, pp. 50–52.

²⁶ SARNOWSKI *et alii* 2012, p. 50.

²⁷ PRESS *et alii* 1992, p. 133; SARNOWSKI 1999, pp. 58–59.

²⁸ PRESS *et alii* 1991, p. 147.

²⁹ SARNOWSKI 2001, p. 86, Fig. 6.

³⁰ SARNOWSKI 1999, pp. 58–59; SARNOWSKI *et alii* 2012, p. 52.

³¹ MAJEWSKI *et alii* 1984, p. 125.

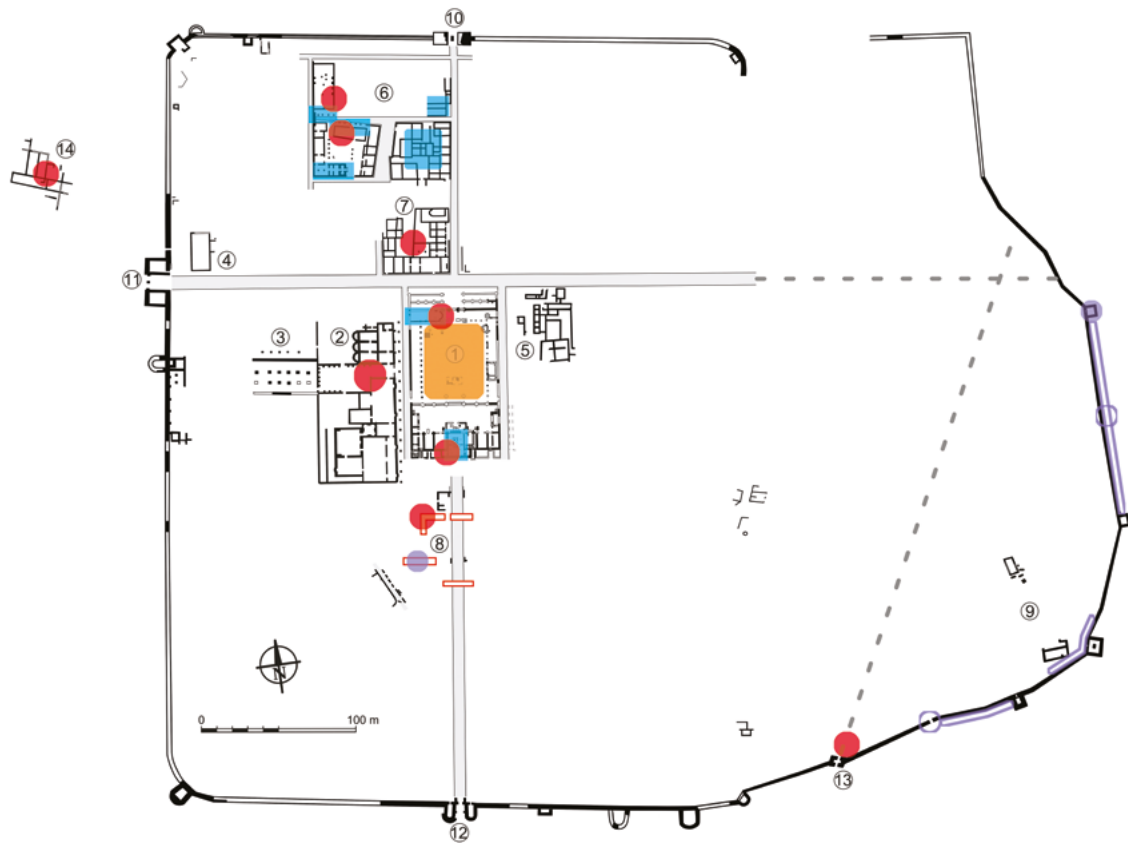


Fig. 3. Novae – Distribution of archaeological evidence (compiled by E. Jęczmienowski, based on the same outline plans as in Fig. 1)

Red: RVMORID-type stamped bricks and tiles

Blue: archaeologically attested building activity, probably dating to the reign of Valentinian and Valens

Orange: courtyard of the *principia*, where *primipilarii* set their dedications

Violet: hoards (filled circles) and constructions along the wall of the annexe (unfilled shapes), probably indicating building works after around 378. Building numbers correspond to those in Fig. 1.

The legionary *thermae* west of the headquarters were still in use during the period in question (Fig. 1:2; Fig. 3:2). The entire complex measured approximately 55×108 m (circa 5940 m²) and consisted of multiple rooms serving various functions.³² It was constructed in the first half of the second century, expanded during the Severan period, and partially rebuilt between the reigns of Gordian III and Constantine I.³³ Several bricks stamped with a RVMORID-type mark were discovered west of the *principia*,³⁴ which may suggest that renovation work was carried out within the legionary *thermae*. Various archaeological finds indicate that the baths ceased to function during the Gothic War of 376–382,³⁵ only about a decade after the stamped bricks in question were produced. They were found in a secondary context, suggesting that these bricks were likely reused during the construction of the episcopal complex above the ruins of the baths. However, it remains uncertain whether they originated from the demolished *thermae* or other structures.

³² SARNOWSKI *et alii* 2012, pp. 68–71; BIERNACKI 2016, p. 19.

³³ BIERNACKI 2016, pp. 30–33; JASIEWICZ 2016, pp. 93, 99, 106.

³⁴ PARNICKI-PUDEŁKO *et alii* 1986, p. 152; MATUSZEWSKA 2013, p. 207; BIERNACKI 2021, p. 86.

³⁵ SARNOWSKI *et alii* 2012, pp. 67–71, 96; BIERNACKI 2016, p. 32; MIHAYLOV 2016, pp. 122–123; RÓŻYCKI 2016, p. 474.

In comparison to the aforementioned zones within the *latera praetorii*, the development of the area in the excavated part of the left *praetentura* underwent nearly complete reconstruction beginning in the second half of the third century (Fig. 1:6–7; Fig. 3:6–7). Previously, there was a *valetudinarium* in the northern part (built circa 100, it remained operational until the first half of the third century, possibly until around 238, when it was abandoned),³⁶ and a residence in the *scamna tribunorum* in the southern part (erected in the late second or early third century and destroyed in the second half of the third century).³⁷ In their place, civilian buildings for residential and economic purposes appeared.

Civilian buildings in the area of the former hospital began to emerge in the 270s.³⁸ During the reign of Valens, the southern half of this area was occupied by two *villae urbanae*—the so-called Portico Building in the west and, to the east of it, the building known as the Eastern Villa (Fig. 1:6; Fig. 3:6). During the so-called Phase 4, which lasted from around 361 until approximately 378, both buildings were renovated and modernized. The architectural changes within the Portico Building were quite significant, with the most important being the construction of the bath in the southern wing of the complex.³⁹ A brick impressed with a RVMORID-type stamp was discovered in this villa, which could perhaps be linked to the construction or renovation activities that took place during the mentioned phase of the building.⁴⁰ Moreover, it is highly probable that the expansion of the *horreum*, located directly to the north of the Portico Building, can also be dated to the period of Valentinian and Valens. Archaeological evidence suggests that the granary was equipped with a drying room during the same phase in which the villa was refurbished.⁴¹ Another brick stamped with a RVMORID-type mark was discovered near the granary as well⁴²—yet another indication that these or other construction activities could have been carried out in the vicinity during the reigns of Valens and Valentinian. Between 361 and 378, some construction works were also carried out in the northeastern quarter of this sector. However, due to its state of preservation, the plan of the building that existed there during this period could only be partially discerned.⁴³ In earlier phases, a glass workshop was present in that area.

In the area of the former residence in the *scamna tribunorum*, a new building was built during the reign of Constantine I (Fig. 1:7; Fig. 3:7). The structure was likely also residential, although it was once interpreted as some kind of public edifice.⁴⁴ Three bricks marked with the RVMORID stamp were also found in this place,⁴⁵ so we cannot rule out the possibility that some renovation works were carried out during the reign of Valens, although this remains uncertain.

So far, the excavations within the *retentura* of Novae have not yielded conclusive results regarding the function of the buildings erected there, particularly the possible location of the legate's residence (*praetorium*).⁴⁶ Nevertheless, continuity in the development of this area has been observed from the first to at least the fifth century. Within the area excavated to date, a hoard of eleven coins, dating from the reigns of Constantius II to Valentinian I, was discovered inside a foundation trench dug during one of the reconstructions of a very solid wall in that area (Wall No. 3). The dating of these coins may link the burial of the hoard to the dramatic events of circa

³⁶ DYCZEK 2005, pp. 231–238; DYCZEK 2011, pp. 16, 25; SARNOWSKI *et alii* 2012, p. 59; LEMKE 2015, p. 93.

³⁷ MILČEVA, GENČEVA 1991, p. 35; GENČEVA 1999, p. 95; SARNOWSKI *et alii* 2012, p. 74.

³⁸ DYCZEK 2005, pp. 231–238; DYCZEK 2011, pp. 25, 28–37; LEMKE 2015, p. 93.

³⁹ DYCZEK 2011, p. 33.

⁴⁰ MAJEWSKI *et alii* 1968, p. 159, Ryc. 46.

⁴¹ DYCZEK 2011, p. 36.

⁴² MAJEWSKI *et alii* 1970, pp. 148, 178, Tabl. X, 4; SARNOWSKI 1985b, p. 50.

⁴³ DYCZEK 2011, p. 35.

⁴⁴ SARNOWSKI *et alii* 2012, p. 92, Fig. 1:7; GENČEVA 1999, pp. 95–96.

⁴⁵ IVANOV 2002, pp. 98, 124; IVANOV 2006, p. 176.

⁴⁶ A short report presenting the results of the last few excavation seasons will be published by A. Tomas in the upcoming volume of *Arheološki Otkriti i Razkopki* for 2024 and 2025.

378, although it cannot be ruled out that some reconstruction activity took place in this area during the reign of Valens. Another indication supporting a similar dating of certain construction works carried out south of the *principia* may be a brick marked with a RVMORID-type stamp also found in one of trenches dug out in last years (Fig. 1:8; Fig. 3:8).

Compared to the area within the walls, evidence of works carried out along the fortifications during the period in question is considerably scarcer. Despite the lack of clear evidence for modifications to the fortifications during the period of Valens and Valentinian, we cannot rule out the possibility that some renovation work took place but traces of such activities were difficult to detect. A single brick stamped with a RVMORID-type mark, found near the gate-tower in the southeastern section of the Late Antique fortifications of the so-called annexe (Fig. 1:13; Fig. 3:13), may hint at such efforts.⁴⁷ Although it is possible that this brick was associated with construction activities in that section of the walls, it remains uncertain whether it was originally used during that period or reused at a later date, after circa 378. The eastern extension of the walls at Novae has been dated by some scholars to the period of the Tetrarchy⁴⁸ or first half of the fourth century,⁴⁹ however, no clear evidence has yet been found to confirm these dates. At a certain point, the walls of the annexe were reinforced, increasing in thickness from 1.6 m to 3 m, and two additional towers (the second and sixth, counting from the north [Fig. 5]) were constructed. This modification, however, may have taken place after the destruction that Novae suffered around 378.⁵⁰ Such a dating is supported by the discovery of a hoard inside one of the towers, consisting of one hundred forty coins minted between 337 and 375.⁵¹

Construction activities may have taken place outside the walls of Novae during the reign of Valens and Valentinian. Several roof tiles marked with the RVMORID stamp were also discovered not far from the west gate,⁵² within the layer of burnt, collapsed roof of a building that served an economic function and was erected on the site of a former villa *extra muros* (Fig. 1:14; Fig. 3:14).⁵³ However, as this building was ultimately destroyed in the early fifth century, the use of these tiles in the construction of the roof does not necessarily date to the years 364–378 and may instead reflect their reuse during repairs carried out after the Gothic invasions around 378.

Novae during the reign of Valens and Valentinian—an overview

The near-complete absence of evidence for renovation work on the fortifications suggests that they underwent no substantial modifications during the period in question. The walls, towers, and gates were probably in good condition and likely required only minor repairs, which remain untraceable to us. At least in some places, the ditch from the Principate era remained in use during the fourth century—for example, in the area of the South Gate (one of the new U-shaped external gate towers was even reinforced due to its proximity to the ditch).⁵⁴ Yet, merely a few dozen meters east of this gate, the ditch was filled in at the beginning of the fourth century due to its intersection with a newly built, similar external tower.⁵⁵ Therefore, the ditch was probably relocated slightly further from the wall in certain areas; however, so far, there is no direct

⁴⁷ DIMITROV *et alii* 1970, p. 66; IVANOV 1997, pp. 560–562; IVANOV 2002, p. 117.

⁴⁸ ČIČIKOVA 1980, pp. 55–66; PRESS, SARNOWSKI 1987, p. 307; POULTER 1994, p. 145; SARNOWSKI *et alii* 2012, pp. 94–96; LEMKE 2015, p. 94.

⁴⁹ KLENINA 2006, pp. 28–29; RÓŻYCKI 2016, p. 471.

⁵⁰ ČIČIKOVA 1983, p. 15; SARNOWSKI *et alii* 2012, pp. 94–96; cf. IVANOV 1997, pp. 560–563.

⁵¹ DIMITROV *et alii* 1967a, pp. 78; DIMITROV *et alii* 1967b, p. 117.

⁵² VLADKOVA 2003, p. 227; IVANOV 2006, p. 186; VLADKOVA 2021, pp. 55, 78.

⁵³ VLADKOVA 2003, p. 227.

⁵⁴ PARNICKI-PUDELKO 1990, pp. 11, 50; ZAKRZEWSKI 2015, pp. 19–20; SARNOWSKI *et alii* 2016, p. 184, Fig. 9.

⁵⁵ SARNOWSKI *et alii* 2016, pp. 183–187.

evidence to prove this. It seems that the fortifications provided defenders with a strong and effective defensive position. The thickness of Novae's walls varied considerably, particularly after the western and southern walls were reinforced in the first decades of the fourth century. The thicknesses of the northern, western, and southern walls measured approximately 1.3 m, 2.4–2.5 m, and 2.9–3.5 m, respectively.⁵⁶ The eastern wall was built entirely from scratch during the Late Antique period⁵⁷ and, as mentioned above, originally had 1.6 m in thickness.⁵⁸ This variation in wall thickness resulted from differences in the natural defensibility of various sections of the fortifications. The northern wall was the least massive, as it was constructed near the high Danube escarpment, where a frontal attack was less likely. This is evidenced by a ditch running along the northern rampart during the Flavian period, which had already been backfilled by around the year 100, when the fortification system was reconstructed in stone.⁵⁹ It was deemed unnecessary, probably because the Danube escarpment had shifted further south due to erosion. In contrast, the southern wall was the thickest, as it stood in an open area and faced slightly elevated terrain to the south. Therefore it required additional reinforcement. The eastern wall, in its original form, was not particularly thick, as its layout was designed to take advantage of the natural topography when it was possible.

Analogies with the well-preserved Lower Danubian Tetrarchic walls of the imperial complex at Felix Romuliana I (Gamzigrad),⁶⁰ the *quadriburgium* at Castra Martis (Kula, Fig. 4),⁶¹ and the city of Diocletianopolis (Chisaria),⁶² which exhibit similar thickness and foundation depth, and their rampart walks levels were registered at heights of 10.4 m, 10 m and 10.5 m respectively, permit a cautious attempt at reconstructing the hypothetical height of the walls at Novae. The most massive sections of the Late Antique fortification walls of Novae (on the western and southern sides of the original legionary fortress) could have reached heights of 10 m or more, up to the level of the rampart walk (or around 12 m or more if battlements are taken into account). The walls were protected by towers which, based on analogies (heights without roofs: Felix Romuliana I – 14.9 m; Castra Martis – 16.3 m; Diocletianopolis – 14.5–15 m),⁶³ were often 4–6 m higher than the level of the rampart-walk. If the aforementioned analogies were considered relevant for Novae, then the height of the towers could have reached 14 m–16 m. Nevertheless, the estimation of the height of the fortifications at Novae requires further study and abovementioned values should be considered only as maximum possible figures based on analogies. Local factors, such as the quality of masonry (which, in the case of the curtain walls at Novae, was not especially impressive), might have significantly influenced the height. However, according to Dietwulf Baatz, the walls should be at least 7 m high to the level of the rampart walk (9 m including battlements) in order to pose a serious obstacle to an enemy attempting to scale them using ladders.⁶⁴ Therefore, the heights of 7 m for the walls (9 m including battlements) and 11–13 m for the towers could perhaps be considered as the minimum.

The towers at Novae were constructed at regular intervals of 28–32 m along the western and southern walls, while along the eastern wall, they were spaced 50–73 m apart. Such distances

⁵⁶ ČIČIKOVA 1980, pp. 55–66; PARNICKI-PUDELKO 1990, pp. 14, 36, 38, 45, 54; SARNOWSKI *et alii* 2012, pp. 44, 94–96; SARNOWSKI *et alii* 2016, pp. 184–185, Fig. 10; ZAKRZEWSKI 2015, pp. 18–19, Fig. 8–9; ZAKRZEWSKI 2020, p. 443.

⁵⁷ SARNOWSKI *et alii* 2012, pp. 94–96.

⁵⁸ ČIČIKOVA 1983, p. 15; SARNOWSKI *et alii* 2012, pp. 94–96. Cf. IVANOV 1997, pp. 560–563.

⁵⁹ SARNOWSKI, KOVALEVSKAJA, TOMAS 2010, pp. 167, 170.

⁶⁰ ČANAK-MEDIĆ 1978, pp. 38, 55; ČANAK-MEDIĆ, STOJKOVIĆ-PAVELKA 2011, pp. 60–62, 64–66, 74–75.

⁶¹ ATANASOVA 2005, pp. 27–32, 244; BĂJENARU 2010, p. 142.

⁶² MADŽAROV 1967, pp. 113–142; MADŽAROV, MADŽAROV 2002, p. 201.

⁶³ Milutinovac (MILOŠEVIĆ, JEREMIĆ 1986, pp. 249, 256, Fig. 8); Qasr Bshir (KENNEDY 2004, pp. 148–149; CAMPBELL 2009, pp. 58, 60; BĂJENARU 2010, p. 85); Diocletianopolis (MADŽAROV, MADŽAROV 2002, p. 202, Obr. 3–4, 204, Obr. 7, 206, Obr. 11); Felix Romuliana (ČANAK-MEDIĆ, STOJKOVIĆ-PAVELKA 2011, pp. 60–62).

⁶⁴ BAATZ 1983, p. 137.



Fig. 4. Remains of the *quadriburgium* in Castra Martis, modern Kula (photo by E. Jęczmienowski)

were rather typical—similar ones were noted in the western provinces of the Empire.⁶⁵ A distance of around 30 m reflects the effective shooting range of a bow.⁶⁶ In that case, an enemy standing between two towers would always be within range of the defenders manning at least one of them. This could explain why, at some point (probably after circa 378), two additional towers were constructed—without them, the intervals between towers would have ranged from 50 to 129 m and thus created vulnerable gaps in the defensive perimeter. The towers were mostly external and exhibited various layouts—U-shaped along the walls of the former legionary fortress and square along the wall of the annexe—with areas ranging from approximately 31 to 151 m² on the outside and 15.5 to 58 m² on the inside.⁶⁷ The dimensions of such towers would have allowed for the placement of no more than two or three *ballistae* per floor, as these machines needed to be spaced approximately 2.3–3 m apart.⁶⁸ The anonymous treatise *De rebus bellicis*, addressed to the emperors of the third quarter of the fourth century (dated to 353–354, 355–360 or 364–375), contains various important information regarding weaponry, combat techniques, as well as the functioning of the border.⁶⁹ In this treatise, we find information that projectiles fired by the most powerful machines (*ballista fulminalis*) could reach the opposite bank of the Danube River.⁷⁰ Due to the lack of additional context and the considerable variation in the river's width, it is impossible to determine the precise range. However, we may assume that it should be several hundred meters. Although the credibility of *De rebus bellicis* is being questioned—as it may reflect a form of wishful thinking—experimental archaeology suggests that the information regarding the impressive range of the *ballista fulminalis* could be reliable, as the machines' projectiles reportedly reached over 600 m.⁷¹ Nevertheless, scholars estimate that different types of *ballistae* could fire effectively as far as 100–170 m, 300–360 m, or even 460 m,⁷² which remains an impressive range. Towers were defended not only by archers and siege engines but also by slingers. The use of slingshots to defend the walls of Novae is well-documented, as a significant number of sling bullets were found inside the tower no. 12.⁷³ While the maximum range of a slingshot could reach up to 400 meters, its effective range was approximately 100 meters.⁷⁴ Apart from

⁶⁵ BAATZ 1983, p. 139.

⁶⁶ BAATZ 1983, p. 137; ČANAK-MEDIĆ, STOJKOVIĆ-PAVELKA 2011, p. 61.

⁶⁷ PARNICKI-PUDEŁKO 1990, pp. 40–42, 89, Fig. 32; SARNOWSKI *et alii* 2016, pp. 184–185, Fig. 10; ZAKRZEWSKI 2020, pp. 103–104, Fig. 3, 4, pp. 111–113, Fig. 12, 15.

⁶⁸ APOSTOL 2012, pp. 85, 92, Fig. 7.

⁶⁹ SOUTHERN, DIXON 2014, p. 2; MEISSNER 2023, p. 8.

⁷⁰ *De rebus bellicis* XVIII 5–6.

⁷¹ MEISSNER 2023, pp. 10–15.

⁷² MARSDEN 1969, pp. 90–91; BAATZ 1994; CAMPBELL 2003, pp. 11, 21; APOSTOL 2012, p. 87.

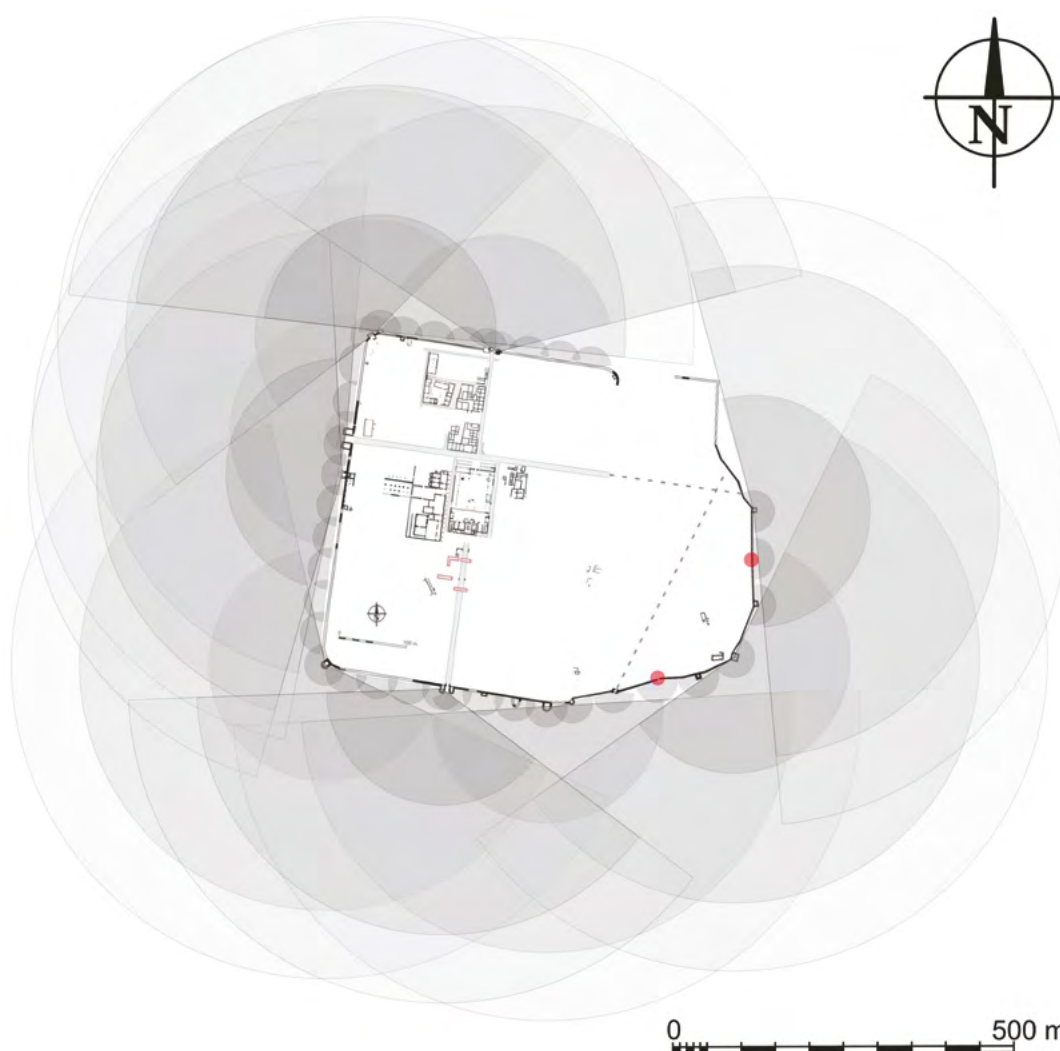


Fig. 5. Novae, simulation of fields of fire from the towers, based on the effective range of bows (30 m) and various types of *ballistae* (170, 360, and 460 m). Red dots mark locations where additional towers were constructed at some point, probably after around 378. To preserve the clarity of the drawing, the *ballistae* simulation was limited to selected towers (compiled by E. Jęczmienowski, based on the same outline plans as in Fig. 1).

sling bullets, a number of stone projectiles were found at Novae, with their diameters ranging from 8 to 32 cm and weighing between 1 and 17 kg.⁷⁵ Of course, the heaviest must have been shot, but the lightest ones could have simply been thrown. The arrangement of towers at regular intervals, combined with the effective range of various weapons, transformed the forefield of the fortress into a hazardous area for advancing foes (Fig. 5). Enemies approaching from multiple directions, both near and far from the walls, were vulnerable to attacks.

There were three gates (north, west, and south), each flanked by two towers of similar design to those along the walls (Fig. 1:10–12). These gates maintained their locations from the Principate era. Along the eastern side, there was a gate in the southern part, consisting of a single tower with a passage through it (Fig. 1:13). A postern was constructed through this wall, also on its southern side; however, it was later closed, and a tower was built in its place.⁷⁶

⁷⁵ SARNOWSKI *et alii* 2016, pp. 186–187.

⁷⁶ BAATZ 1990, pp. 59–67; LAHARNAR 2011, p. 341.

It remains uncertain whether a gate existed in the northern half of the eastern wall (Fig. 1). Such a gate might have been expected along the projected axis of the *via principalis* of the legionary fortress. The street near the Principate-era eastern gate of the fortress continued to be in use during the fourth century, as evidenced by numerous coins found in the area, with the latest minted between 393 and 395.⁷⁷ On the one hand, it was a known phenomenon in Late Antiquity to decrease the number of gates to enhance defensive capabilities,⁷⁸ but on the other hand, in Novae, the presence of a gate leading east would have considerably facilitated transportation to and from that direction. The results of earlier Bulgarian excavations seem to rule out this hypothesis.⁷⁹ Nevertheless, as the excavation of the eastern wall in the 1960s took place at the very beginning of archaeological work at Novae, some elements may have remained unnoticed—perhaps due to excavation techniques and priorities typical of that period.

Traces of building activity from the time of Valens and Valentinian are far more frequent inside the walls of Novae than along the fortifications (Fig. 3; Tab. 1). However, the most distinctive evidence of this activity—the bricks marked with a RVMORID-type stamp—are not particularly numerous. The exact number of such bricks remains uncertain due to the lack of detailed information in some publications. So far, I am aware of only about eighteen RVMORID-type stamped bricks found in Novae. In contrast, in the area of the West Gate, one hundred eighty three bricks were discovered bearing the LEPIFICOR stamp⁸⁰—the most common type of Late Antique stamped brick from Novae—dated to the second decade of the fourth century.⁸¹ These were found almost exclusively along the fortifications. The relatively small number of bricks or roof tiles marked with the RVMORID stamp suggests that construction activity in Novae during the time of Valens and Valentinian was focused not on large scale construction works but mainly on the renovation and maintenance of existing structures. However, in some cases, more significant modifications were introduced—such as in the *principia*. Unfortunately, bricks bearing the RVMORID stamps were often found in secondary contexts, meaning they provide only indirect evidence that renovation work may have been carried out in a particular area during the period in question. Nevertheless, these bricks were found in various locations within Novae. Their distribution across the site suggests that various construction works carried out during the reign of Valentinian and Valens may have been undertaken throughout the entire intramural area.

The scope of works may have been even larger than it appears based on the finds of RVMORID-type stamped bricks, as the reuse of older building materials was quite common in general. Moreover, not all bricks were stamped, but unfortunately, we do not know what percentage bore stamps, whether the stamping process was standardized in any way, or if each brickyard followed its own stamping rules.⁸² Perhaps only a few tiles produced during this period were stamped. A discovery from Sexaginta Prista (Ruse), about 50 km down the Danube from Novae, also supports this idea. Only seven stamped roof tiles were found among the ruins of the collapsed roof of the fourth century *principia*, which was repaired during the reign of Valens and Valentinian.⁸³ Three of them bear the RVMORID-type stamp, while the remaining four are marked with a similarly dated NOVAS stamp—interestingly, a type of stamp so far not attested at Novae.

⁷⁵ LEMKE 2013, pp. 357–363.

⁷⁶ DIMITROV *et alii* 1967a, p. 78; DIMITROV *et alii* 1967b, p. 117; IVANOV 1997a, p. 563; SARNOWSKI *et alii* 2012, pp. 94–96.

⁷⁷ SARNOWSKI *et alii* 2016, p. 182.

⁷⁸ See for example: Drobeta (TUDOR 1965) and Čezava-Novae (VASIĆ 1984; VASIĆ 1990).

⁷⁹ DIMITROV *et alii* 1974.

⁸⁰ SARNOWSKI 1985b, p. 49.

⁸¹ WACHTEL 1982, p. 242, no. 23; SARNOWSKI 1985a, p. 111; SARNOWSKI 2007, p. 26, note 8; VON BÜLOW 2007, p. 463.

⁸² BRANDL, FEDERHOFER 2010, pp. 50–51.

⁸³ VĀRBANOV, DRAGOEV 2007, p. 233.

Tab. 1. Bricks and roof tile marked with the RVMORID stamp. Number of finds and places of their discovery

Place of discovery	Number of brick and roof tiles	Bibliography
Headquarters (<i>principia</i>)	3	MAJEWSKI <i>et alii</i> 1984, p. 125. PRESS <i>et alii</i> 1992, p. 133. SARNOWSKI 1999, pp. 58–59.
Baths (<i>thermae</i>)	6	PARNICKI-PUDELKO <i>et alii</i> 1986, p. 152. MATUSZEWSKA 2013, p. 207. BIERNACKI 2021, p. 86.
Left <i>praetentura</i>	5	MAJEWSKI <i>et alii</i> 1968, p. 159, Ryc. 46. MAJEWSKI <i>et alii</i> 1970, pp. 148, 178, Tabl. X, 4. SARNOWSKI 1985b, p. 50. IVANOV 2002, pp. 98, 124.
<i>Retentura</i>	1	unpublished
Fortifications of the annexe	1	DIMITROV <i>et alii</i> 1970, p. 66. IVANOV 1997, pp. 560–562. IVANOV 2002, p. 117.
<i>Extra muros</i> complex near the West Gate	At least 2 ⁸⁴	VLADKOVA 2003, p. 227; IVANOV 2006, p. 186; VLADKOVA 2021, pp. 55, 78.
TOTAL	At least 18	

The *intra muros* urban development of Novae during the reign of Valens and Valentinian reflects the dual character of the fortress during this period. The investments in military buildings within the walls during that period show that the army still held a prominent role in Novae. The construction of the hall within headquarters portico and the modifications in the most sacred space of the legionary headquarters suggest that the *principia* continued to play an important role in the second half of the fourth century. This role is further emphasized by a series of fifteen dedications set up in the courtyard of *principia* by civilian *primipilarii* responsible for the transportation of supplies to the border troops from the eastern Mediterranean provinces, a process carried out within the *pastus militum* system. They are dated between 284 and 432.⁸⁵ At least one of these inscriptions was set up during the reign of Valens and Valentinian (in 367/368),⁸⁶ while the dating of two more to that period is plausible.⁸⁷ The placement of these inscriptions suggests that, during the reigns of Valens and Valentinian, Novae was of significant military importance, with imperial authorities placing considerable emphasis on ensuring the proper supply of the frontier troops. Furthermore, as the legio I Italica was based at least at one other location during that period (Sexaginta Prista), Novae, still serving as the seat of the legionary prefect, may have been involved in the logistical redistribution of supplies, with the *principia* building potentially playing a notable role in this process. The placement of the *horreum* not far to the west of the *principia*, and close to the main gate of the fortress, could correspond with this logistical function.⁸⁸ The Principate-era hall next to the west gate remained in use during that period, following its reconstruction in the early fourth century.⁸⁹ The continuous operation of the legionary bath

⁸⁴ Unfortunately, the exact number of stamped roof tiles was not specified; they were merely referred to in the plural form.

⁸⁵ SARNOWSKI 2005; ŁAJTAR 2013; SARNOWSKI 2013.

⁸⁶ BRESSON, DREW, BEAR ZUCKERMAN 1995, pp. 139–146; IGLNovae 178; ŁAJTAR 2013, p. 110.

⁸⁷ AE 2013, 1335 = ŁAJTAR 2013; ŁAJTAR 2021, p. 124.

⁸⁸ The excavations in this area are still in progress, and the stamped tiles found there have not yet been published.

⁸⁹ LEPIFICOR-type stamped bricks were used in its reconstruction (GENČEVA, ANDREEVA 2021, 617). So far, no RVMORID-type stamped bricks are known from that area.

in this period, and perhaps also some repair works, may underline the status of the military in Novae during that period, although perhaps the civilians could use baths either. An indication of that could be the fact that this complex was transformed into commercial area after baths ceased to function.⁹⁰

Regardless the important military role Novae played, significant parts of land within the fortress walls were occupied by civilian buildings serving various purposes. Evidence of construction activity during this period has been documented within these structures as well, highlighting the prosperity of the civilian population inside the fortress. These civilian buildings replaced earlier military structures after they fell out of use and became redundant due to destruction and changes in Roman military organization, which led to a significant reduction in the size of legions compared to the second and third centuries. The precise location where the troops were garrisoned remains an open question. Bulgarian excavations of the legionary barracks in the 1960s did not yield conclusive results regarding the continuity of their use,⁹¹ while a section of another barrack investigated near the northern wall had already ceased to function by the second half of the third century.⁹² Nevertheless, we cannot rule out the possibility that some of the Principate-period barracks were still in use to accommodate the reduced garrison, while the rest were dismantled or adapted for other purposes as they were no longer needed.

Conclusions

Despite the relative scarcity of evidence, some general conclusions about Novae during the period of Valentinian and Valens can be drawn. There is little doubt that construction works in Novae were undertaken as part of the broader building policy pursued during the reigns of these emperors. While the precise scope of these interventions remains difficult to ascertain, it may be inferred that their primary objective was the upkeep—and possibly the modernization—of structures within the fortress. The absence of archaeological evidence for alterations suggests that the fortifications were well maintained, with no apparent need for substantial repairs or reconstruction in the period preceding the war with the Goths. The reconstructed height of the walls and towers, as well as their distribution, suggests that the fortification system at Novae must have posed a significant challenge to any potential adversary.

The lack of large-scale modifications to the existing structures at Novae, and the focus on their limited modernization and repair, fits well within the broader context of imperial building policy along the Lower Danube during the reign of Valentinian and Valens. Similar works were observed at other existing bases as well, e.g., at the aforementioned Sexaginta Prista, and at Iatrus (Krivina),⁹³ and Sucidava (Celei).⁹⁴ In contrast, works aimed at constructing completely new structures were limited almost exclusively to watchtowers—such as, for example, those at Hajdučka Vodenica,⁹⁵ Mihajlovac-Blato,⁹⁶ Batin⁹⁷ and most probably in the vicinity of Cius (Gârliciu)⁹⁸—which were erected from scratch during that period. These works were intended to increase the density of military posts along the border.

⁹⁰ DIMITROV 2013, p. 253; MIHAYLOV 2016, p. 123.

⁹¹ DIMITROV, *et alii* 1974, pp. 149–154.

⁹² SARNOWSKI, KOVALEVSKAJA, TOMAS 2010, p. 168.

⁹³ BÖTTGER *et alii* 1982, p. 238; DÖHLE 1985, pp. 157; BARTOSIEWICZ *et alii* 1995, pp. 18, 29–43, 46, 53; DINČEV 1999, pp. 166–174; VON BÜLOW *et alii* 2007, pp. 32, 120, 313–314, 528; VON BÜLOW 2007, pp. 466, 468, 474; RIZOS 2013, p. 662.

⁹⁴ TUDOR 1948, p. 149; TOROPU, TĂTULEA 1987, pp. 83–85; BONDOC 2009, p. 78.

⁹⁵ JOVANOVIĆ 1984, p. 329; JEREMIĆ 2007, p. 312.

⁹⁶ TOMOVIĆ p. 1986, pp. 404, 412; JEREMIĆ 2007, pp. 312–313.

⁹⁷ AE 1999, 1341; STANČEV 1999, pp. 203–205.

⁹⁸ ISM V 125; CIL III 6159 = 7494 = IGLR 233; Them. Orat. 10.137; OPRIȘ 2020a, p. 15

The army played a significant role in Novae during this period. Major military buildings continued to be maintained, and imperial authorities placed considerable emphasis on ensuring the proper supply of the frontier troops. At the same time, it seems that civilian structures occupied a notable portion of the space within its walls. The civilian element continued to develop during the period in question, and the non-military residents of Novae modernized and repaired their buildings, which is especially evident in the area of the so-called Portico Building. The history of the legionary baths at Novae seems to reflect the changes of the character of the base in the second half of the fourth century especially well. The complex to the west from *principia* was maintained during the period preceding the Battle of Adrianople, probably even refurbished during the reign of Valentinian and Valens, somehow attesting the dominant significance of military at Novae at that time. This contrasts with the later time, so after ca. 378, when the baths were first abandoned, and especially in the period of the late fourth to the first quarter of the fifth century, when the construction of the first phase of the bishopric complex began in their place,⁹⁹ indicating the growing importance of non-military elements. Eventually, the growth of the bishopric complex led to a shift in the administrative centre of Novae from the military *principia*, which also fell out of use in the fifth century, to the emerging episcopal seat.

Ancient texts

Amm. Marc.	Ammianus Marcellinus. <i>Dzieje rzymskie</i> [History of Rome/ <i>Res gestae</i>], vols. I–II, tr. I. LEWANDOWSKI, Warszawa 2002.
Cod. Theod.	<i>The Theodosian Code and Novels, and the Sirmondian Constitutions. A Translation with Commentary, Glossary, and Bibliography</i> , ed. C. PHARR, Princeton 1952.
De rebus bellicis	<i>De rebus bellicis: Waffen und Finanzen in der Spätantike</i> , ed. S. GRAF, B. MEISSNER, Mainz 2023.
Not. Dign.	<i>Notitia dignitatum, accedunt Notitia Urbis Constantinopolitanae et Laterculi provinciarum</i> , ed. O. SEECK, Berolini 1876.
Them. Orat.	P. Heather, J. Matthews, <i>The Goths in the Fourth Century (Translated Texts for Historians)</i> , Liverpool 1991.

Abbreviations

AE	<i>L'Année épigraphique</i> , Paris.
CIL	<i>Corpus Inscriptionum Latinarum</i> , ed. T. Mommsen et al., Berlin 1863–.
IGLNovae	J. KOLENDO, V. BOŽILOVA, <i>Inscriptions Grecques et Latines de Novae (Mésie Inférieure)</i> , Paris 1997.
IGLR	E. POPESCU, <i>Inscripțiile grecești și latine din secolele IV–XIII descoperite în România</i> [Greek and Latin inscriptions from the fourth–thirteenth centuries discovered in Romania], București 1976.
ILSH	DESSAU, <i>Inscriptiones Latinae Selectae</i> , vols I–III, Berlin 1892–1916.
ISM	<i>Inscriptiones Daciae et Scythiae Minoris. Series altera: Inscriptiones Scythiae Minoris Graecae et Latinae</i> , vols. I–VI, Bucharest 1980–2018.
RIU	L. BARKÓCZY, A. MÓCSY, S. SOPRONI, A. BURGER, F. FÜLEP, <i>Die römischen Inschriften Ungarns</i> , vols. I–IV, Budapest 1972–1984.

⁹⁹ SARNOWSKI et alii 2012, p. 98; BIERNACKI 2013, p. 33.

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Emil Jęczmienowski
Independent researcher
e.jeczmi@gmail.com
orcid.org/0000-0002-0012-317X

Karolina Trusz

ISLAND BISERICUȚA REVISITED—UNDERWATER SURVEY AROUND THE ISLAND

Abstract: The island of Bisericuța, situated in the southern part of Lake Razim approximately 2.5 kilometers east of the ancient city of Argamum in present-day Romania, presents distinctive geological and archaeological features. Archaeological investigations, notably by Paul Nicorescu in 1926, have uncovered remnants such as pottery, kiln and walls of the outpost dating back to the Neolithic, Hellenistic, or Roman periods.

Previous underwater research efforts, including aerial surveys conducted by Michai Severus Ionescu and Efim Gămureac, have identified potential underwater walls in the northern part of Bisericuța (around 10 meters from the shore), speculated to constitute part of a small harbour. Subsequent non-invasive underwater surveys conducted by archaeologists from the Bayerischen Gesellschaft für Unterwasserarchäologie revealed the presence of double-wall, long for over 300 meters structures, possibly associated with a pier or breakwater.

Subsequent underwater surveys with use of non-invasive methods of research in 2017 and 2023 as part of the Archaeology of the Limes Maritimus Scythicus (ArchLiMar) project led by Polish-Georgian team aimed to further explore the island's surroundings. Detailed examination of the underwater terrain, including a limestone plateau provided insights into the island's geological evolution and its impact on the archaeological remnants of the past.

Overall, ongoing research efforts continue to shed light on the historical aspects of island Bisericuța, contributing to a deeper understanding of its past significance and environmental dynamics.

Keywords: underwater archaeology, island, lakebed, side scan sonar, Black Sea, island Bisericuța

Introduction

Island Bisericuța is located in the southern part of Lake Razim, approximately 2.5 km east from the ancient city Argamum, in today's Romania (Fig. 1). In the western part of the island, which measures about 380 meters in length and 58 meters in width, a limestone hill with nearly vertical edges is observable. To the east, the island slopes gently down to the lake, where it is densely covered with reeds. Based on data gathered from the 1953–2000 survey, it was observed that Bisericuța transitioned from a peninsula to an island within a span of 50 years.¹ The archaeological

¹ Growth of water is visible on aerial photos, see: IONESCU, GĂMUREAC 2006, p. 376, Pl. 1.



Fig. 1. Map with location of the island Bisericuța in Razim Lake (prepared by K. Trusz, base map from © 2014 Esri).

research on the island was conducted by Paul Nicorescu in 1926. Nicorescu mentioned that the island in north part was wider, but due to the strong north-eastern winds it eroded due to the time.² Despite the presence of archaeological remains like pottery and walls dating back to the Neolithic, Hellenistic or Roman period on the site, there is an absence of mention regarding the island's/peninsula's existence in ancient literary sources.³ However, there was a small outpost on the island, commanding a view over the tributary of the Danube.

History of underwater research around the island: previous research

Over the years, research on the island has been primarily focused on land surveys aiming to identify archaeological remains. In 2002 during excavations Michai Severus Ionescu and Efim Gămureac also conducted aerial surveys around the island. In the aerial photographs, researchers identified two potential underwater walls situated roughly 8–10 meters from the shoreline in the northern part of Bisericuța. Ionescu and Gămureac speculated that the walls,

² NICORESCU 1944, p. 97.

³ To read more about the island's history check among others: NICORESCU 1944; IONESCU, GĂMUREAC 2006; COJA 1977, pp. 165–166.

oriented east-west, might constitute part of a small port.⁴ Regrettably, the aerial photographs accompanying the survey report do not allow any verification.⁵ With this hypothesis, a first non-invasive underwater survey was conducted in 2016 by archaeologists from the Bayerischen Gesellschaft für Unterwasserarchäologie.⁶ According to research conducted by a German team, the two walls discovered in 2002 do indeed exist, but they run in a north-west and south-east direction. A double-wall structure was associated with either a pier or possibly a breakwater.⁷ Noteworthy is information that these walls were a total of approximately 380 m long, and at least 10 m wide.⁸ However, due to poor visibility conditions, no diving verification was conducted.⁹ This summarizes the underwater research conducted around the island thus far.

Underwater survey around the island: seasons 2017 and 2023

In 2017, cooperation commenced between the on the Antiquity of Southeastern Europe Research Center at the University of Warsaw and the Eco-Museum Research Institute “Gavrilă Simion” in Tulcea (ICEM Tulcea), initiating the Danube Underwater Heritage Project. The primary objective of this project was to systematically investigate and evaluate archaeological remains within Lake Razim, Lake Sinoe, Danube Delta and selected points sites along the Romanian Black Sea coastline.¹⁰ One of the tasks of the first research season was to verify the bottom of Lake Razim between the ancient city of Argamum and the island Bisericuța. During the underwater non-invasive investigation several anomalies were identified for further research.¹¹

Underwater surveys around the island and the area between Bisericuța and the mainland were reinstated in 2023 as a part of the Archaeology of the Limes Maritimus Scythicus (ArchLiMar) project, previously known as Danube Underwater Heritage Project.¹² Season 2023 encompassed conducting surveys across the entirety of the island’s surrounding area, verification of anomalies found during the 2017 season, and examining the potential walls discovered by researchers from Romania and Germany in 2002 and 2016.

By employing side scan sonar, the seafloor surrounding the island underwent scanning to generate a bathymetric map and a photomosaic of its substrate. The anomalies which were recorded in 2017 occurred to be single finds connected to modern fishing traps. Through the sonar survey and subsequent data analysis, it was determined that the underwater region constitutes a natural rock formation—a limestone plateau extending. Overlaying the photomosaic onto island photography reveals the natural expansion of the island westward (i.e. to Argamum). The geological formation visible underwater bears resemblance to an island in shape. The plateau widens closer to the island, reaching a width of approximately 105 meters, and narrows towards the west, spanning a length of about 160 meters (Fig. 2).

⁴ IONESCU, GĂMUREAC 2006, p. 380.

⁵ IONESCU, GĂMUREAC 2006, Pl. 1.

⁶ As a part of the project “Underwater Archaeology of Lower Danube and Western Black Sea: Exploring Ancient Harbours and Shipwrecks in Northern Dobruja Coastline” between Bayerischen Gesellschaft für Unterwasserarchäologie and ICEM Tulcea, FIEDERLING *et alii* 2023, p. 379.

⁷ FIEDERLING *et alii* 2023, p. 391.

⁸ FIEDERLING *et alii* 2023, p. 389.

⁹ FIEDERLING *et alii* 2023, p. 389; Abb. 17.

¹⁰ LEMKE *et alii* 2018, p. 87.

¹¹ LEMKE *et alii* 2018: pp. 94–95, Fig. 8/b.

¹² Project Limes Maritimus Scythicus (ArchLiMar) is a cooperation between Faculty of Archaeology, University of Warsaw and ICEM Tulcea. The underwater research in 2023 was part of the project coordinated by Martin Lemke *Preliminary research of the Argamum and the interior of Dobruja towards the borders of the Roman Empire* funded by the programme “Initiative of Excellence – Research University”, PSP 501-D115-20-004316; LEMKE *et alii* 2018, p. 94.

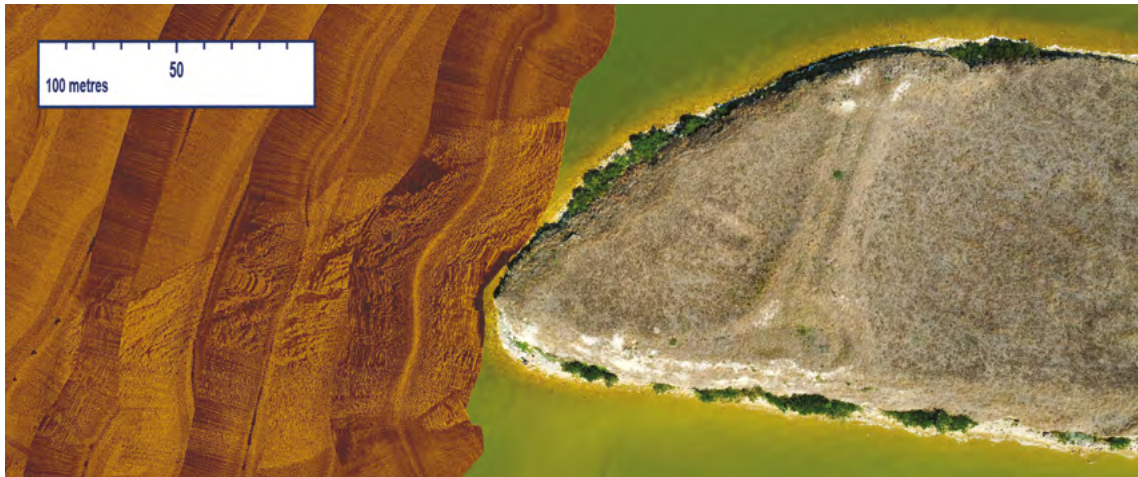


Fig. 2. Photomosaic of the lakebed around the north-western part of the island. Rocky formation with its natural expansion westward (prepared by K.Trusz/Foundation for Underwater Archaeology).

During the research, participating archaeologists methodically traversed the rocky formation,¹³ meticulously scrutinizing the submerged stones to discern potential architectural remnants. The limestone plateau is located shallowly underwater, with a depth of about 0.4 meters in the central part. It slopes gently towards the north, south and west, where the stone structures naturally curve to a depth of 1.5 meters before disappearing and the bottom becomes covered with sand mixed with silt (Fig. 3). Despite underwater visibility limited to around 5 centimetres, individual stones potentially indicative of structural elements were carefully examined through tactile inspection. This meticulous examination extended to stones in water encircling the island, spanning from the shoreline to an expanse of around 200 meters into the bay. Notably, none of the examined stones exhibited indications of intentional shaping or the remains of presence of dovetail clamps typical for interlocking masonry.¹⁴ It is worth noting that the rock on the island undergoes characteristic changes, with weathering processes leading to the formation of stone flakes. These formations can be observed both in the water along the island's shore and underwater (Fig. 4).

On the southern part of the island's hill are visible traces of the late fortification wall, therefore on this side are visible in water few, but always, fragments of pottery and bricks. No pottery fragments are visible on the northern side of the island. Southern part of the island is also more suitable for mooring small ships or vessels due to lack of strong winds and currents which occur on the northern and western part of the Bisericuța island. A potential mooring, sheltered from strong winds by a hill, could only consist of a quay located closer to the south-eastern part of the island—allowing easier transportation of various commodities to the military outpost on top of the hill.

Additionally, aerial photographs were taken of the north-western section of the island, revealing the significantly murky water. Stones underwater are only visible near the island, further to the lake the water gets less transparent. Having in mind information about the potential walls found underwater on aerial photographs back in 2002 around 8–10 meters from the island, researchers might have been dealing with natural rocks imitating walls which can be seen on the aerial photography (Fig. 4).

¹³ Team members were walking in line, the distance between people was 2 metres.

¹⁴ The way breakwaters were built in antiquity, see e.g. BLACKMAN 1982, p. 197.

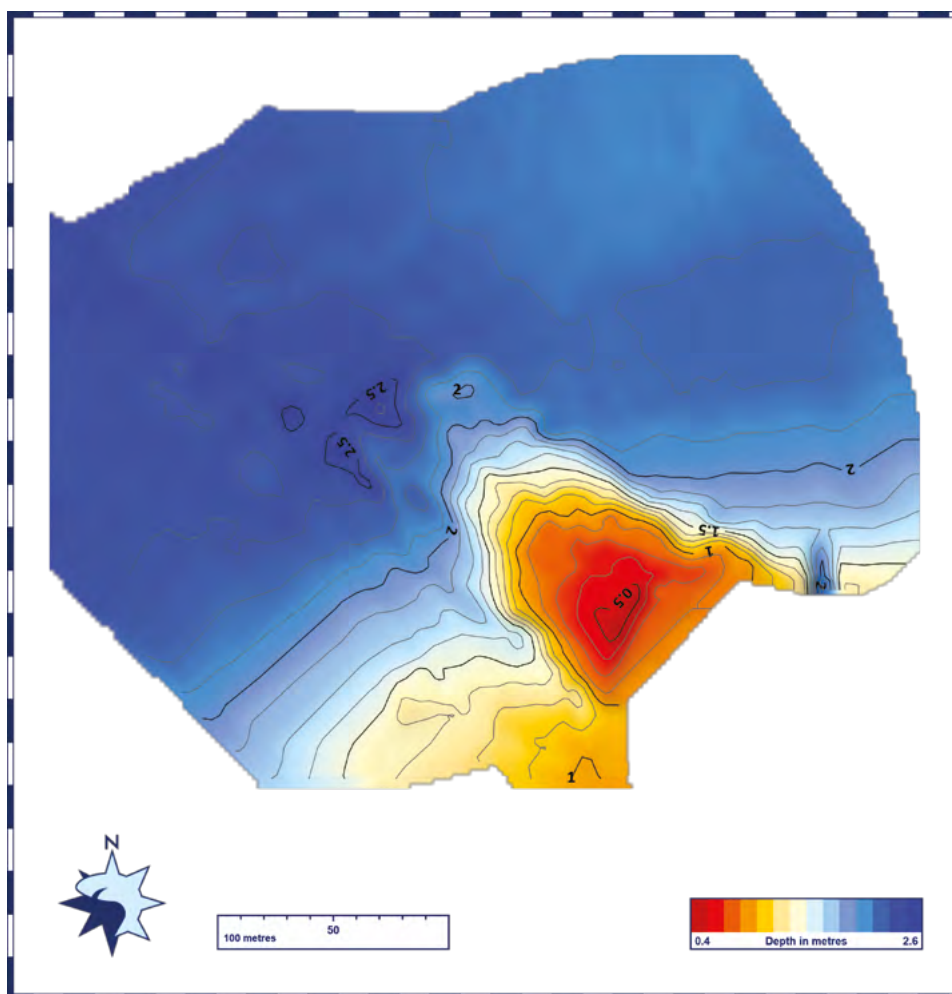


Fig. 3. Bathymetry map of the rocky formation around the north-western part of the island Bisericuț (prepared by K. Trusz/Foundation for Underwater Archaeology, University of Warsaw).



Fig. 4. Aerial photography of the north-western part of island with visible stones under water (prepared by Foundation for Underwater Archaeology, University of Warsaw).

Conclusions

P. Nicorescu mentioned after his research on the island in 1926, that the Bisericuța was wider and more elongated in the north-western part in the past.¹⁵ This theory aligns with the observation of the lakebed in this part of the island. Side-scan sonar data reveals the shape of a raised rocky bottom indicating that these formations are most likely an extension of island that has eroded over time. This is influenced by the strong winds from the north-west and the currents circulating within the vicinity of the island, which can be seen in the drone photographs.

Although there is no concrete evidence, we can assume that some parts of the buildings on the island were destroyed and submerged in Lake Razim. However, it is challenging to confirm existence of the walls found underwater and that they were 380 meters long, especially considering that the rocky formation is only approximately 160 meters in length. Furthermore, after the formation descends to the lakebed, there is no further evidence of potential archaeological objects.

The waters surrounding the island of Bisericuța are worth further investigation to enhance comprehension of the dynamics within a system of lakes semi-open to the sea. Moreover, such examination would contribute to a deeper understanding of the island's significance as a pivotal location overseeing the estuary of a tributary of the Danube into the Black Sea.

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Karolina Trusz
Independent researcher
karolina.torusu@gmail.com
orcid.org/0000-0002-5812-1126

¹⁵ NICORESCU 1944, p. 97

Alfred Twardecki

THE INVASION OF RADAGAISUS (405–406 CE) AND THE SETTLEMENT OF THE CHERNIAKHIV CULTURE IN OLBIA

Abstract: The invasion of Italy by Radagaisus in 405 CE posed a significant challenge to the Western Roman Empire, culminating in his defeat by Stilicho at Faesulae in 406. This article reassesses the event within a broader political and archaeological framework, incorporating recent findings related to the Cherniakhiv culture in Olbia. By shifting the focus from traditional migrationist interpretations, the study examines internal Gothic political dynamics and their interactions with Rome. It argues that Radagaisus' campaign was not merely the result of Hunnic pressure but part of wider transformations within the Gothic world. The analysis challenges existing historiographical paradigms, highlighting the role of elite Gothic groups in shaping late antique geopolitical developments. The findings contribute to an evolving discourse on the complexities of late Roman–barbarian relations, offering new perspectives on the interconnected nature of migration, military conflict, and cultural change in the early fifth century.

Keywords: Radagaisus, Goths, Cherniakhiv culture, Olbia Pontica, Late Roman Empire, Migration Period

Introduction

Radagaisus' invasion of Italy in 405 CE posed a grave danger to the Western Roman Empire.¹ The campaign ended in 406 CE, when Stilicho annihilated the invading host near Faesulae (modern Fiesole).² Most modern reconstructions treat this defeat chiefly as a prelude to the rise of Alaric, culminating in the sack of Rome in 410 CE.³ Drawing upon recently published archaeological evidence from Olbia—particularly studies presented in a special issue of *Archaeologia Polona* (vol. 62, 2024)⁴—this article re-examines the episode and shifts attention from imperial policy to the internal politics of the Goths beyond the Roman frontier.

History of research

Beyond Edward Gibbon's "domino theory", set out at the end of the eighteenth century,⁵ one of the first systematic studies of the barbarian invasions was produced by John Bagnell Bury.⁶

¹ Orosius, VII.37.

² Zosimus, V.26.2-5; BURY 1928, pp. 75–84.

³ KULIKOWSKI 2018, pp. 143–159; WIJNENDAELE 2016, pp. 267–284.

⁴ TWARDECKI, BUISKYKH 2021, pp. 251–271; *Archaeologia Polona* 62, 2024.

⁵ GIBBON 1782.

⁶ BURY 1928.

Between these two landmarks, several other works also advanced understanding of the collapse of the Western Roman Empire. Theodor Mommsen,⁷ for example, offered a detailed appraisal of Rome's political and military structures and highlighted the part played by external pressures in the empire's decline. Taken together, these studies shaped later debates on the significance of the barbarian incursions for the disintegration of Roman rule.

Migration theory

John Bagnall Bury located Radagaisus's incursion within the wider crisis of late-Roman warfare, arguing that the invasion followed directly from the empire's waning capacity to contain external threats.⁸ He further assumed that Radagaisus had already acted in concert with Alaric during the Italian raids of 401—raids Bury traced back to a point of origin somewhere in Pannonia—and treated the years 401–410 as one continuous sequence. In his reconstruction, Radagaisus's Ostrogoths, Alaric's Visigoths and the Germanic peoples massed along the Rhine formed interlocking elements of a single migratory movement, one that, as he put it, dealt Gaul "a blow from which it will never recover; the influence of Italy upon Gaul is reduced and will continue to diminish."⁹ Bury's reading laid the groundwork for later migrationist explanations.

Later research further developed the migration theory, proposing that Radagaisus's movement was part of broader population shifts triggered by the expansion of the Huns. In particular, Herwig Wolfram emphasised the role of migratory pressure in Germanic incursions into the Roman world, arguing that such pressures were a central factor in the destabilisation of the western provinces.¹⁰ Peter Heather formulated the hypothesis of a second wave of Hunnic invasion at the transition between the fourth and fifth centuries.¹¹ This view has been challenged by Michael Kulikowski, who refutes Heather's idea of a renewed Hunnic migration after c. 400 CE, arguing instead for the continuous presence of the Huns in Eastern Europe since the 370s. Kulikowski critiques the overinterpretation of the sources and maintains that there is no substantial evidence for a distinct second migratory wave.¹²

Political and strategic explanations

Alternative interpretations emphasise Rome's internal fragility rather than external pressures. In Russian-language scholarship, one of the earliest proponents of this view was Mark Shchukin, whose work had a profound influence on the formation of perspectives on the Goths and the Cherniakhiv Culture among Russian-speaking researchers. A key advantage of Shchukin's scholarship lies in his access to specialist literature discussing the results of excavations conducted at Cherniakhiv culture sites, primarily in Ukraine. Consequently, his work is the product of interdisciplinary research to a significantly greater extent than publications by Western scholars.

Nevertheless, Shchukin advocates the view that the Goths did not establish a single large state but rather a network of cooperating federations. Furthermore, he asserts that the Cherniakhiv culture disappeared shortly after the Hunnic invasion. However, he is a staunch opponent of any

⁷ MOMMSEN 1856.

⁸ BURY 1928, pp. 75–84.

⁹ BURY 1928, p. 83.

¹⁰ WOLFRAM 1988.

¹¹ HEATHER 2010.

¹² KULIKOWSKI 2018, pp. 89–103.

form of the “domino theory”, arguing instead that the period in question was characterised more by a gradual cultural interpenetration than by sudden and large-scale migrations.¹³

This approach was significantly developed by Mikhail Kazanskii, who proposed an important, albeit controversial, thesis. In his analysis, he explores the impact of Radagaisus’ invasion on the decline of the Cherniakhiv culture and, more broadly, on migration processes in both Eastern and Western Europe. He contends that Radagaisus was not merely the leader of a raid into Italy but rather a figurehead of a wider movement of peoples, linked to the collapse of Gothic structures around the Black Sea and their subsequent westward displacement. According to Kazanskii, the Cherniakhiv culture disappeared around 400 CE, a conclusion he bases on archaeological evidence.¹⁴

I disagree with the assertion that the Cherniakhiv culture disappeared so early in the Dnipro region, as this process in fact occurred approximately thirty years later. Nevertheless, his observation concerning the link between Radagaisus’ invasion and wider migratory movements is particularly noteworthy. Kazanskii rightly recognises that the defeat of Radagaisus did not bring these processes to a close but rather contributed to the continued movement of the Goths towards the imperial frontiers.

Another significant aspect of Kazanskii’s study is his emphasis on the archaeological evidence confirming the presence of so-called “Eastern Goths” in Italy during this period, which lends support to their involvement in the military and political transformations within the empire. He suggests that part of Radagaisus’ forces originated from these groups and may have been incorporated into the Roman army following his defeat.

Walter Goffart presents an interpretation broadly similar to that of Mark Shchukin. He critiques traditional accounts of the so-called barbarian invasions, arguing that contemporary narratives often place excessive emphasis on ideological factors.¹⁵ His approach has been gaining increasing recognition among specialists in the field. For instance, Jeroen Wijnendaele suggests that contemporary Roman sources exaggerated the scale of Radagaisus’ invasion in order to enhance Stilicho’s military prestige.¹⁶ Wijnendaele takes this argument further—similarly to Kazanskii—by proposing a closer, and potentially coordinated, connection between the Vandals’ incursions along the Rhine and Radagaisus’ advance from the middle Danube. This is a particularly intriguing observation which, in my view, merits further investigation. Among the most recent scholars supporting this perspective is Chris Doyle, who contends that Honorius’ weak administration and internal court conflicts played a decisive role in facilitating Radagaisus’ entry into Italy.¹⁷

Yves Modéran in his analysis of the role of the Vandals in the late Roman Empire, examines how barbarian incursions, including that of Radagaisus, fit within Rome’s broader challenges of integrating external groups into its military and political structures. He opposes Heather’s theory of the “second Hunnic wave” as the primary catalyst for the broader crisis in *barbaricum* between 375 and 404, instead advocating for a more complex interpretation of the factors driving instability in this period.¹⁸ Finally, Oto Mestek has recently presented a highly insightful and thorough analysis of the sources, formulating the hypothesis that certain Victohali, a subgroup of the Hasdingi Vandals, formed the core of Radagaisus’ army alongside the Alans. However, he situates their homeland in the vicinity of Pannonia. In his view, a form of unity among the Vandals, Taifals, and Suebi, as well as the Alans—who continued to migrate and intermingle between the middle Danube and the Rhine—cannot be ruled out.¹⁹

¹³ SHCHUKIN 2005, p. 253.

¹⁴ KAZANSKII 2011.

¹⁵ GOFFART 2006.

¹⁶ WIJNENDAELE 2016.

¹⁷ DOYLE 2018.

¹⁸ MODÉRAN 2014.

¹⁹ MESTEK 2024.

Religious and ideological aspects

Another interpretation suggests that the invasion had, at least in part, a religious dimension. The most prominent proponent of this view was Orosius, who, writing in the early fifth century, portrays Radagaisus as a pagan bent on destroying Christian Rome.²⁰ Modern scholarship has largely disputed this claim. Jeroen Wijnendaele, for instance, rejects the idea of a religious war, maintaining that Radagaisus' expedition was primarily a strategic military operation rather than an ideological crusade.²¹ Mikhail Kazanskii concedes that Radagaisus' forces may have contained groups resistant to the Empire's advancing Christianisation, yet he finds no direct evidence for a religious programme.²² Such caution accords with broader debates on the nexus between religion and politics in late antiquity, most clearly articulated by Hervé Inglebert.²³ I therefore concur that, even if religious considerations played any role, they were secondary. Neither the Gothic allies of openly pagan figures such as Julian the Apostate, Procopius, or (later) Arbogast and Eugenius, nor the much-debated persecution of Gothic Christians under Athanaric, reveal a consistent ideological agenda; political expediency appears to have prevailed. The same pragmatic reading underpins the latest scholarship—for example, Oto Mestek's recent study.²⁴

Primary Sources

Ancient testimony concerning Radagaisus is sparse. A concise synopsis can be found in *The Prosopography of the Later Roman Empire*.²⁵ The fullest recent collection of passages is offered by Oto Mestek.²⁶ Drawing on this evidence, Mestek arranges the sources in three broad strands.²⁷

The first, a Latin Christian theological tradition, casts Radagaisus as a pagan barbarian and emblem of Christianity's victory (Orosius; Augustine; Jerome). The second, a Latin chronicle tradition, provides terse yet often inaccurate notices—mis-dating events and styling him “king of the Goths” (Ammianus Marcellinus; Prosper; Eutropius; Marcellinus Comes; Cassiodorus; *Chronica Gallica*; Jordanes, who records Radagaisus in the *Romana* rather than the *Getica*). The third, Greek classicising historiography, aspires to analytical breadth but is hardly free of error: Eunapius, Olympiodorus and Zosimus supply a wider canvas yet little reliable military detail. Mestek argues that this consistent labelling of Radagaisus as a Goth fits a post-410 Roman narrative that portrayed the Goths as the Empire's primary antagonists.²⁸

I would like to draw attention first and foremost to two key witnesses: Orosius, *Historia adversus paganos* 7.37, and the fragment of Olympiodorus preserved by Photius in *Bibliotheca* cod. 80. Orosius' description of Radagaisus as *paganus et Scythia* is, in my view, fundamental for reconstructing the invader's background. The label plausibly points to a Gothic group that retained its ancestral religion. Current research indicates that pagan cult-centres were still active in the early fifth century around Olbia and Tyras, lending archaeological support to such an identification.²⁹ Photius' wording, meanwhile, requires a close philological examination, which I undertake below.

²⁰ Orosius 7, 37.

²¹ WIJNENDAELE 2016, pp. 267–284.

²² KAZANSKII 2011.

²³ INGLEBERT 2001.

²⁴ MESTEK 2024, p. 487.

²⁵ *PLRE* 2, 934.

²⁶ MESTEK 2024, p. 477 n. 2.

²⁷ MESTEK 2024, pp. 486–488.

²⁸ MESTEK 2024, p. 488.

²⁹ TWARDCKI 2024a; SAVELIEV 2024; SHEIKO 2024.

Archaeological sources

Archaeological evidence that can be unequivocally linked to Radagaisus' campaign is extremely limited. Kazanskii's detailed survey lists only a small group of objects from Italy that can, on stylistic grounds, be ascribed to East-Gothic groups.³⁰

By contrast, the results of the Polish-Ukrainian excavations at Olbia carried out in 2016–2021, together with the studies collected in the special issue *Archaeologia Polona* 62, place the discussion in a different light.³¹ The post-Roman strata at the site now emerge as a substantial settlement that belongs unmistakably to the Cherniakhiv cultural horizon. Although definitive confirmation must await the resumption of fieldwork, current evidence strongly suggests that Olbia served as an important centre of trade and craft production.

Borys Magomedov was the first to suggest that the settlement functioned as a local seat of political power,³² an interpretation reinforced by the new discoveries.³³ It is argued here that its importance probably exceeded a purely regional role and that Olbia may in fact represent the principal stronghold of the Greuthungi (Fig. 1).³⁴

Regardless, it is necessary to reassess Shchukin's argument that the apparent absence of large-scale "princely" residences proves the Goths never developed a more hierarchical political organisation—a conclusion that reflected the state of research when he wrote. Beyond Olbia, a second plausible political and economic hub is Komariv on the middle Dnister, where excavations have revealed both a glass-working installation and a hypocaust-heated structure. The settlement is exceptionally extensive: its confirmed area covers ca. 12 ha and the most conservative estimate places its total size at no less than 20 ha.³⁵ Its position at the head of navigation on the Dnister placed it on the main corridor linking the Black Sea with the Baltic, while simultaneously furnishing an ideal base from which to launch operations into Pannonia.

I would also underline the strategic, though often underestimated, importance of the Vistula–Dnister waterway, which acted as a vital conduit between the Wielbark-culture heartland and the Santana de Mureş – Cherniakhiv complex. Wielbark artefacts discovered in the northern Pontic zone—including Olbia itself—demonstrate active contact throughout the third to fifth centuries.³⁶ Conversely, Cherniakhiv influence is equally visible in Wielbark settlement areas. The Masłomęcz group in south-eastern Poland offers perhaps the clearest illustration: both archaeological data and a DNA analysis indicate that these communities comprise Goths who left the Black Sea region in the late second century and resettled in the Wielbark zone.³⁷ A further striking case is the exceptionally affluent Wielbark cemetery at Weklisce on the Baltic coast.³⁸ Taken together, the material implies that trade—and therefore regular communication—between the two regions was far denser than hitherto assumed. Indeed, the Vistula–Dnister route³⁹ has attracted human interest from prehistory to modern times (Fig. 2).

Archaeological evidence likewise clarifies the character of Gothic–Hunnic interaction east of the Danube and the Rhine. The richly furnished Hunnic grave from Jakuszowice in southern Poland—distinguished above all by the deposition of a "gold bow"—offers the clearest illustration.⁴⁰ The emblematic significance of such weaponry had been recognised long before the detailed

³⁰ KAZANSKII 2011, p. 30.

³¹ TWARDECKI, BUISKYKH 2021; *Archaeologia Polona* 62 (2024).

³² MAGOMEDOV 2020.

³³ MAGOMEDOV 2024a.

³⁴ TWARDECKI 2024a.

³⁵ PETRAUSKAS, SHYSHKIN 2024.

³⁶ TWARDECKI, BUISKYKH 2021.

³⁷ WOŁĄGIEWICZ 1993.

³⁸ NATUNIEWICZ-SEKUŁA, OKULICZ-KOZARYN 2011; NATUNIEWICZ-SEKUŁA, BACZEWSKI 2023.

³⁹ KONOPKA 1938.

⁴⁰ ŻUROWSKI 1921; NOSEK 1959; GODŁOWSKI 1991; RODZIŃSKA-NOWAK 2022; PRZYBYŁA and NAGLIK 2024.

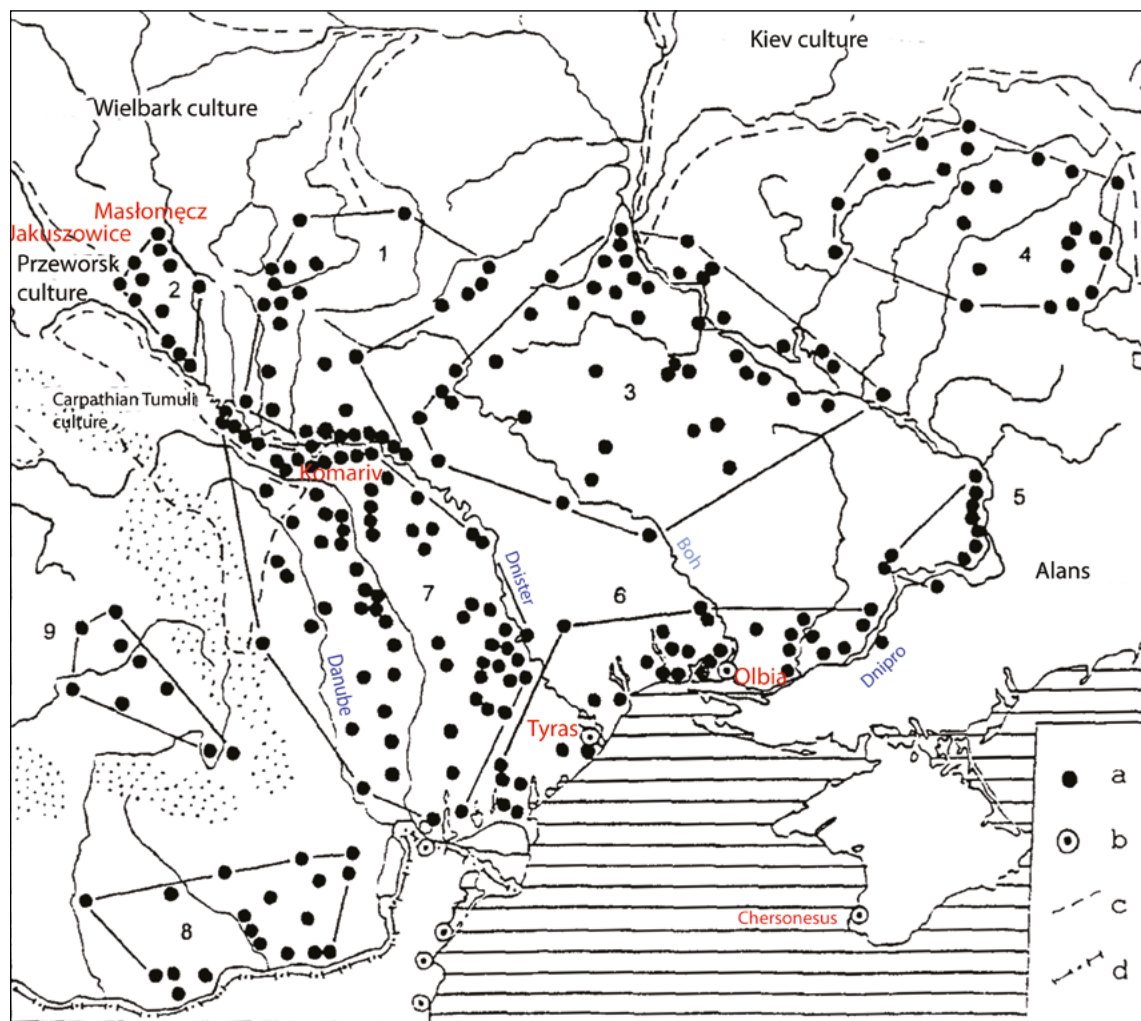


Fig. 1. Map of the distribution of the Cherniakhiv culture according to Borys Magomedov's classification. Numbers indicate the regions within the Cherniakhiv Culture: 1 – Western Ukraine; 2 – Upper Dnister; 3 – Central Ukraine; 4 – Eastern Ukraine; 5 – Lower Dniipro; 6 – Northern Black Sea Coast; 7 – Moldova; 8 – Muntenia; 9 – Transylvania.
 Legend: a – major Cherniakhiv archaeological sites; b – ancient cities; c – cultural boundaries; d – Roman Empire's border in the fourth century CE (elaborated by A. Twardecki).

analyses of Hyun Jin Kim,⁴¹ and has consistently been interpreted as indicating a proto-feudal relationship binding local élites to Hunnic overlords—a view most recently reaffirmed.⁴²

Taken together, the material record forces us to reconsider the likelihood that structures of political dependency did not first arise under Hunnic domination—an assumption rarely questioned—but may already have begun to crystallise in the generations preceding the Hunnic incursion, perhaps during the semi-legendary reign of Hermanaric.⁴³

⁴¹ Kim 2013; Kim 2015; Kim 2017.

⁴³ Jordanes, pp. 116, 121.

⁴² HARMATTA 1951; LÁSZLÓ 1951; RODZIŃSKA-NOWAK 2021.

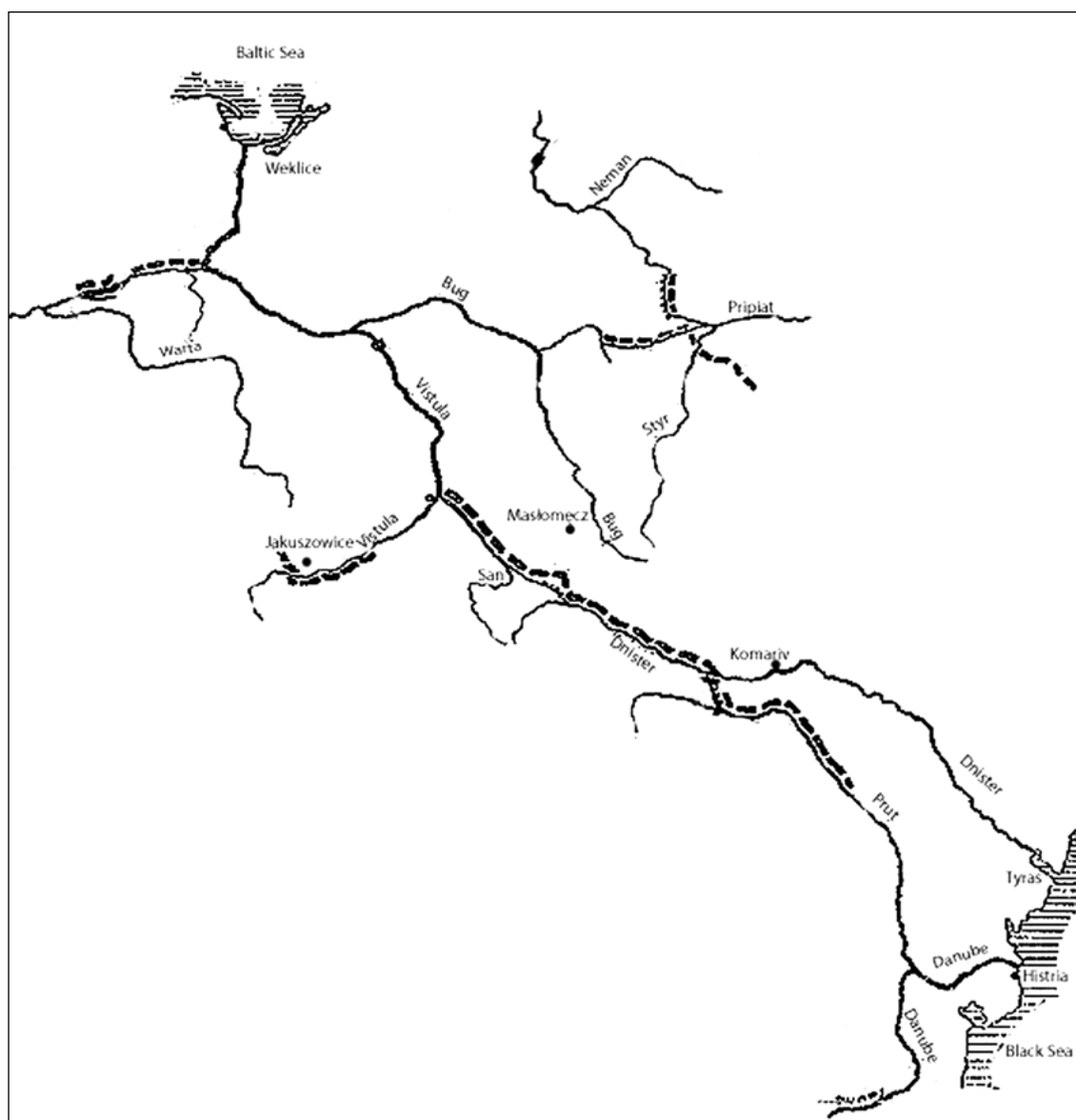


Fig. 2. Map illustrating possible waterway connections via the Vistula, San, Dniester, Prut, and Danube rivers between the Baltic and Black Seas (elaborated by A. Twardecki, based on the 1927 drawing by A. Matakiewicz).

Germanic Sagas

Early Germanic sagas also offer a valuable contextual framework in this regard. I have previously examined their potential significance in enhancing our understanding of the role of the Gothic settlement in Olbia in greater detail. Here, however, I wish to briefly restate my proposal to identify *Árheimar á Danparstœðum* with Olbia and its surrounding area, as well as with the mythical Oium described by Jordanes, who, in this instance, was undoubtedly drawing upon Gothic oral traditions.⁴⁴

⁴⁴ Twardecki 2024a; Twardecki 2024b.

At the same time, other sagas also refer to Reiðgotaland and the Reiðgotar—possibly signifying “the land of the mounted Goths”—which, according to some sources, begins south of Poland, approximately in the vicinity of the Gothic settlement at Komariv in present-day Podolia.⁴⁵ I would also like to emphasise the inherently fluid nature of myths, including early Germanic traditions, and our primary source, *Hlöðskviða*, which serves as the foundation of this argument as a source. Nevertheless, while these accounts should not be treated as strictly factual, they may at the very least lend support to the hypothesis that a centre of the Reiðgotar existed on the lower Dnipro. In this context, Wolfram’s longstanding observation that the Greutungi became horsemen remains particularly relevant.⁴⁶ I can only add that over time, I have become even more convinced of this identification. The vision of the “Land of the Mounted Goths” strongly resembles the condition of the Greeks whom Dio Chrysostom encountered in Olbia at the end of the first century CE in Oration 36.⁴⁷ This represents a new factor, and consequently, my interpretation of Radagaisus’ invasion diverges from those presented to date.

Finally, the very content of *Hlöðskviða* indicates that the central conflict arises between half-brothers over their father’s inheritance. One of them is the offspring of a union with a Hunnic princess and is, therefore, half-Goth, half-Hun. As a result, he gains the support of the ruler of the Huns in this fundamentally internal Gothic war. Despite all the reservations regarding the mythological and epic nature of the narrative, it is worth noting that this account resonates in a striking manner with Kim’s latest interpretation and earlier conclusions drawn from the analysis of the Jakuszowice find concerning the proto-feudal nature of Hunnic rule. Such a system of governance does not preclude conflicts between vassals, a phenomenon frequently observed in the relations between different Gothic factions.

Of course, even under this assumption, the question remains regarding the role of Olbia and Tyras as such centres during the time of Radagaisus, as well as the potential connections between Radagaisus and the rulers residing in Árheimar á Danparstœðum. At this point, I would like to return to the previously mentioned analysis of the fragment of Olympiodorus as preserved by Photius.

Photius fragment

This passage is taken from *Bibliotheca* (Βιβλιοθήκη) by Photius, specifically from his summary of the Histories of Olympiodorus of Thebes, preserved in Codex 80. In this section Photius recounts the Gothic invasion of Italy under Radagaisus (405–406 CE) and their defeat by Stilicho. Of particular significance is his reference to the elite Gothic warriors called optimates, who numbered up to twelve thousand. After Radagaisus’ defeat, Stilicho incorporated these men into his army. It seems plausible to identify the optimates with the Reiðgotar of Old Germanic sagas or with the Greutungi of Greco-Roman authors.⁴⁸

Text

Ὅτι τῶν μετὰ Ῥοδογαῖσον Γόθων οἱ κεφαλαιῶται ὀπίματοι ἐκαλοῦντο, εἰς δώδεκα συντείνοντες χιλιάδας, οὓς καταπολεμήσας Στελίων Ῥοδογαῖσον προσηταιρίσατο.

There is no apparatus to this fragment.

⁴⁵ TOLKIEN 1960, p. XXII, note 1.

⁴⁶ WOLFRAM 1988, pp. 167–168.

⁴⁷ Dio Chrysostom 1940.

⁴⁸ WOLFRAM 1988, 167–168.

Translation:

Among the Goths who accompanied Radagaisus, the most distinguished were called *optimates* and numbered up to twelve thousand. After defeating Radagaisus, Stilicho incorporated these [warriors] into his forces.

Commentary

Philological notes

The Greek sentence preserved in Photius' *Bibliotheca* (Cod. 80) is a concise paraphrase of Olympiodorus' original wording, shaped by the linguistic preferences of later Byzantine Greek. Despite its compressed form, it is syntactically coherent and its meaning remains clear. Photius, summarising Olympiodorus, reports that the leading Goths who accompanied Radagaisus were called *optimates* and numbered up to twelve thousand. After Radagaisus' defeat, Stilicho enrolled these men in his own army. The phrase οἱ κεφαλαιῶται ὀπίματα ἐκαλοῦντο should therefore be understood as referring to the Gothic aristocracy—individuals of both social and military pre-eminence.

To substantiate this interpretation of the title, the papyrological record for κεφαλαιῶται in late-antique and early-Byzantine Egypt shows that its bearers perform three principal functions: fiscal, corporate and administrative. In fiscal documents they appear as financial overseers or tax officials,⁴⁹ in guild dossiers they manage collective funds,⁵⁰ and in administrative or legal texts they act as local officials or witnesses.⁵¹ Taken together, these sources demonstrate that κεφαλαιῶται held important positions within the fiscal, legal and administrative structures of Egypt and generally signified a form of local leadership.

Finally, the clause οὓς καταπολεμήσας Στελίχων Ῥοδογάϊσον προσηταιρίσατο may, at first glance, suggest that Stilicho defeated and incorporated Radagaisus himself into his forces. However, upon closer examination, it becomes clear that the logical meaning of the sentence is rather: “those whom Stilicho, having defeated Radagaisus, incorporated into his own army”—that is, the *optimates* who had accompanied Radagaisus. The relative pronoun οὓς refers back to the Gothic elite, not to Radagaisus, and Ῥοδογάϊσον functions as the object of καταπολεμήσας, not of προσηταιρίσατο.

Historical context

Otto Mestek offers a concise and innovative reading of this passage, engaging earlier scholarship on Olympiodorus.⁵² His conclusions, however, concentrate on ethnic identification, linking Radagaisus with the Victohali and with Sarmatian groups. By contrast, I adopt a socio-political perspective: the phrase οἱ κεφαλαιῶται ὀπίματα ἐκαλοῦντο is best understood as designating a Gothic aristocracy originating in “Scythia” and still adhering to paganism.

Edward Gibbon, however, initiated an interpretative tradition in which the term referred to elite units of Gothic cavalry within the Roman army.⁵³ This understanding may have been shared even by Photius, as a reference to the *Gotho-Graeci optimatoi* appears in the works of the poet Georgios of Pisidia, who celebrated Emperor Heraclius' victory over the Sassanids

⁴⁹ P. Cair. Isid. 57; P. Oxy. 10.1330; P. Oxy. 83.5364; P. Münch. 3.1.69.

⁵⁰ P. Cair. Masp. 1.67090; P. Col. 7.150.

⁵¹ O. Heid. 443; P. Amh. 2.80–82.

⁵² MESTEK 2024, pp. 488–489.

⁵³ GIBBON 1845, col. 1182.

in 623 CE,⁵⁴ as well as in the *Strategikon* of Maurice.⁵⁵ Gibbon's anachronistic reading was already criticised in the nineteenth century,⁵⁶ and has been queried more recently,⁵⁷ yet it continues to colour modern accounts.

It is true that *optimatoi* later became the name of an elite cavalry force in the Byzantine period and of the military-administrative district (the *Thema Optimaton*) with which that force was associated. The widespread attestation of the term in Byzantine military manuals and narrative sources undoubtedly encouraged its retrojection into earlier history. Nonetheless, as noted above—and as the *Reiðgotar* of the Old Norse sagas likewise suggest—there are specific historical and comparative reasons to doubt that the word in Olympiodorus refers to cavalry as such. It is more plausible to regard *optimates* as members of the Gothic aristocracy whose standing was defined as much by lineage and political authority as by military function.

Historical context of Radagais invasion

Let us now examine the historical context of Radagaisus' invasion. After the death of Julian the Apostate in 363, the Goths attempted to renegotiate the *foedus* concluded with Rome, exploiting the political turbulence that followed. Procopius—claiming succession as Julian's closest male relative and heir to the Constantinian line—apparently courted Gothic support by promising to relax the treaty once he had overthrown Valens.⁵⁸ In seeking barbarian allies for an internal struggle, Procopius unwittingly set in motion developments later magnified by the arrival of the Huns.

According to Ammianus Marcellinus, Procopius' usurpation (26.5.15) coincided with an Alamannic incursion into Gaul, provoked—so the historian says—by affronts suffered at Valentinian's court. Concurrently, the Goths were gathering for a raid on imperial territory (26.6.11). There is no firm basis for assuming deliberate coordination between these movements; yet the overlap is striking, coming as it did during the final years of the broad political constellation traditionally associated with Hermanaric's hegemony—an entity that some scholars extend from the Baltic to the Black Sea and from the Danube to the Volga.⁵⁹ Archaeological indications of continuing contact among the Wielbark, Cherniakhiv and Santana de Mureş cultural zones strengthen the temptation to posit a concerted Germanic strategy.⁶⁰ For the present, however, decisive evidence is lacking, and the synchronism must remain an attractive but unproven hypothesis.

Zosimus supplies a fuller version of Procopius' preparations than Ammianus Marcellinus. While Ammianus confines himself to a terse notice of the usurper's period in hiding and praises his aptitude for intelligence-gathering,⁶¹ Zosimus relates how Procopius slipped away from an estate near Caesarea in Cappadocia and made his way by sea to Chersonesus in Taurica.⁶² That journey need not be read merely as a flight to safety: Chersonesus commanded the maritime routes that linked the Crimea with Olbia and Tyras, and thus offered an ideal base from which to maintain contact with Gothic groups on both shores of the Pontic steppe. Ammianus explicitly records that Athanaric furnished Procopius with auxiliary contingents,⁶³ a detail that presupposes functioning channels of communication across the region.

The analysis of late-antique ceramics from Olbia points to enduring connections with other Black Sea centres.⁶⁴ If, as recent work suggests, a sizeable Cherniakhiv settlement there served

⁵⁴ NEGIN, D'AMATO 2020, pp. 5, 12.

⁵⁵ Maurice, book 2, 6 ff.

⁵⁶ HERBERT 1838, p. 315 f.

⁵⁷ McMAHON 2014, pp. 66–67.

⁵⁸ Ammianus Marcellinus 26.20.3.

⁵⁹ WOLFRAM 1988, pp. 85–88, 117–119.

⁶⁰ TWARDECKI, BUISKYKH 2021, pp. 270–271; MAGOMEDOV, PETRAUSKAS 2024, p. 28; WOŁĄGIEWICZ 1993.

⁶¹ Ammianus Marcellinus 26.6.6–7.

⁶² Zosimus 4.4.13–16.

⁶³ Ammianus Marcellinus 31.3.4.

⁶⁴ DOMŻAŁSKI 2021, pp. 163, 176; DIDENKO 2024.

as a political hub of pagan Goths, Procopius' choice of Chersonesus as a base for negotiation was strategically sound: the city controlled the sea-routes linking the Crimea with both Olbia and Tyras. Zosimus claims that the venture prospered, asserting that Procopius enlisted ten thousand Gothic warriors for his campaign against Valens.⁶⁵ Ammianus, however, speaks of only three thousand auxiliaries⁶⁶ and mentions the usurper's correspondence with Gothic rulers.⁶⁷ If Zosimus' confused chronology is inverted, and Procopius' sojourn in Chersonesus is read in the light of his later dealings with the "king of the Scythians", the sequence of events becomes markedly more coherent.

Following Procopius' defeat, Valens launched a brutal persecution of the usurper's adherents and simultaneously inflamed relations with the Goths. Rejecting the explanations tendered by their rulers, he resolved to punish them by force.⁶⁸ In 367 he crossed the Danube and opened what proved to be a highly successful first campaign. The secondary literature on these operations is voluminous; here I cite only the syntheses of Heather and Kulikowski.⁶⁹ Of particular importance is the episode in the third campaigning season (369 CE), when Valens crossed the river near Noviodunum and, after an uninterrupted march, struck at the distant Greuthungi, "a notably warlike tribe".⁷⁰ This action implies that he traversed Thervingian territory, which lay nearer the frontier, and then crossed the Dnister, for the lands of the Greuthungi began beyond that river. Ammianus' narrative thus suggests that the chief objective of the expedition—conceived as retribution for Procopius' supporters—was directed specifically at the Greuthungi settled around Tyras and Olbia. The reading, in turn, buttresses the hypothesis that Procopius' earlier journey to Chersonesus was intended above all to establish contact with the Greuthungi (via the western Crimea and Olbia) and to secure their military assistance in his contest with Valens.

Procopius thereby drew the Greuthungi into Rome's civil strife, enlarging the horizons of their leaders and encouraging a more assertive political stance. After the Hunnic irruption and the catastrophe at Adrianople, Theodosius I restored a precarious equilibrium, settling substantial Gothic groups within the empire. Yet that arrangement barely outlived him: renewed tensions at Constantinople culminated in 399, when Gainas led an uprising against Arcadius.⁷¹

These events were no anomaly. In the ensuing decade Goths again exploited imperial rivalries—most dramatically during the conflict surrounding Stilicho and Alaric.

Another Goth, Fravitta, played a decisive role in suppressing the uprising, forcing Gainas to flee beyond the Danube, where he was ultimately killed by the Huns under Uldin's command in 401 CE. Gainas was most likely an Arian Christian, whereas Zosimus⁷² explicitly identifies Fravitta as a pagan. In recognition of his military and political service, Fravitta was honoured with the consulship in 401 CE; however, at an unspecified later date, he was executed as a result of court intrigues. If Fravitta was indeed connected to the pagan Greuthungi, his death may, in some way, be linked to Radagaisus' invasion of Italy in 405 CE.

Conclusion

It seems a hypothesis worth considering that in 405 CE, Radagais led the *Reiðgotar* in an invasion of Italy. According to the highly condensed version of Olympiodorus, as preserved by Photius, his army included a significant representation of the group most highly regarded by the Goths themselves as their most valiant branch—those inhabiting the territories east of the Dnister.

⁶⁵ Zosimus 4.7.2.

⁶⁶ Ammianus Marcellinus 26.10.3.

⁶⁷ Ammianus Marcellinus 27.5.1.

⁶⁸ Ammianus Marcellinus 27.5.2–3.

⁶⁹ HEATHER 1991; KULIKOWSKI 2006.

⁷⁰ Ammianus Marcellinus 27.5.9.

⁷¹ HEATHER 1991; KULIKOWSKI 2006; Zosimus 5.14–18.

⁷² Zosimus 5.20.1; HEATHER 1991, pp. 186–190.



Fig. 3. Map highlighting the key locations relevant to this paper (elaborated by A. Twardecki, based on Google Maps)

The most prominent centre of their domain was the settlement of *Árheimar á Danparstœðum*, the former Olbia, which was identified with the mythical Gothic Oium (Fig. 3).

Moreover, this invasion may have been merely another act in the ongoing drama between the Romans and the Greuthungi, a struggle that had been unfolding since at least the time of Procopius, who clearly illustrated that this was a double-edged sword. While the Romans could exploit internal divisions among the Goths, the reverse was also true. In this context, figures such as Fritigern and Gainas played pivotal roles, and following their deaths, Alaric increasingly became the central figure in these conflicts.

Furthermore, it cannot be ruled out that, despite the replacement of Hermanaric's hegemony by Hunnic overlords, the near-simultaneous incursions along the Rhine frontier were, in some measure, consciously co-ordinated. As discussed above, Hunnic authority extended north of the Carpathians, embracing districts associated with the Przeworsk and Wielbark cultures.

Regardless of the precise nature of these power structures, it remains indisputable that pre-existing settlements not only persisted but, in many cases, continued to thrive under Hunnic rule.⁷³ This prosperity was doubtless preceded by a phase of harsh pacification, during which local populations were subjugated and elements of the native elite eliminated. Those who remained

⁷³ REIDA *et alii* 2024.

seem to have been drawn into a system of coexistence which, though restrictive, was nevertheless sustainable and broadly functional within the wider Hunnic imperial order.

Based on this evidence, it is reasonable to assume that, despite the flight of certain former elites and their supporters, life in Olbia remained largely unchanged. A crucial indicator of this continuity is the sizeable Gothic contingent that fought alongside Attila at the Catalaunian Plains (451) and the prominence of their leaders at the Hunnic court. Jordanes—our principal, if problematic, witness—notes their considerable strength.⁷⁴ Yet by that date most Cherniakhiv settlements along the Dnipro had disappeared, and the Gothic presence under Attila was probably smaller than under earlier Hunnic rulers.

Radagaisus' defeat appears to have hastened the decline of Cherniakhiv culture along the lower Dnipro, Olbia included. Yet the enrolment of his élite warriors into Alaric's following after Stilicho's death greatly enhanced the Visigothic leader's power, making him the chief beneficiary of the crises of 399–410 CE. The fall of Radagaisus and the Greuthungi in their former heartland temporarily weakened that branch of the Goths; at the same time, it accelerated a realignment that yielded the mature bipolar Gothic order of Visigoths and Ostrogoths. The latter required almost two generations after Attila's death in 453 CE fully to re-establish themselves, by which time no substantial pagan Gothic centre survived in this part of Europe and new cultural groupings—among them the Slavs—had emerged. Given the tenor of the extant Greek and Roman sources, it is scarcely surprising that the long-pagan Greuthungi have been sidelined in accounts of the Gothic wars with Rome. If the perspective sketched here is sustained by further enquiry, it would reinforce the thesis restated by Michael Kulikowski: that the Migration Period was driven principally by internal transformations within Roman and Gothic society, the Hunnic irruption being only one element in a broader process.

Abbreviations

PLRE *The Prosopography of the Later Roman Empire*, eds. A. H. M. JONES, J. R. MARTINDALE, and J. MORRIS, Cambridge.

Literary Sources

Ammianus Marcellinus	<i>Rerum Gestarum</i> . tr. J. C. ROLFE, Cambridge 1935–1940.
Dio Chrisostom	<i>Discourses</i> , tr. J. W. COHOON, H. LAMAR CROSBY, Cambridge 1940.
Jordanes	<i>Iordanis Romana et Getica</i> , ed. T. MOMMSEN, Berlin 1882.
Maurice	<i>Strategikon</i> , tr. G. T. DENNIS, Washington 1984.
Orosius	<i>Historiae Adversus Paganos Accedit Eiusdem Liber Apologeticus</i> (Corpus Scriptorum Ecclesiasticorum Latinorum), ed. K. ZANGENMEISTER, reprint, Wien 2013.
Procopius	<i>De Bellis</i> , eds. J. VON HAURY, G. WIRTH, Leipzig 1962–1964 (revised 1976–1978).
Zosimus	<i>Zosime. Histoire nouvelle</i> , tr. F. PASCHOD, Paris 1971–1986.

Papyri and Ostraca series

BGU	<i>Berliner Griechische Urkunden</i> . ed. C. WESSELY, Berlin 1895–.
O. Heid.	<i>Ostraca, Papyri und Pergamente der Heidelberger Papyrus-Sammlung</i> , ed. R. SEIDER, Heidelberg 1976.

⁷⁴ Jordanes, *Getica* 38.198–200.

- P. Amh.
P. Cair. Isid.
P. Cair. Masp.
P. Col.
P. Mich.
P. München
P. Oxy.
P. Oxy.
P. Princ.
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Alfred Twardecki
 Institute of Archaeology and Ethnology
 Polish Academy of Sciences (IAE PAN)
 a.twardecki@iaePAN.edu.pl
 orcid.org/0000-0002-0380-3058

Jerzy Żelazowski

ALCUNE CONSIDERAZIONI SULLE ISCRIZIONI LATINE DI RISINIUM (BOCCE DI CATTARO) IN MONTENEGRO

Abstract: Many years of Polish archaeological research in Risinium also encompassed epigraphic material, crucial for reconstructing the city's and region's history. A project was undertaken to locate preserved inscriptions and publish them anew, providing a reliable source base for further study. In total, 47 Latin and 8 Greek inscriptions were identified, alongside manuscript evidence demonstrating how inscriptions functioned in modern times as reference points for cultural identity in the Bay of Kotor. A valuable testimony is the eighteenth century manuscript by Andrija Balović, kept in Perast, which—while recounting the town's history—provides important information on Risinium. The article confronts such traditions with preserved epigraphic material. It is significant that until the twentieth century ancient inscriptions were placed on façades of private and public buildings as historical evidence, illuminating the organization of Risinium and the origins of its inhabitants, mainly from central and southern Italy. Local attachment to antiquity even produced false inscriptions in the 17th century, intended to emphasize the region's role in Roman politics. This phenomenon illustrates the use of inscriptions as instruments of cultural identity, regardless of content, often obscure to the population. The widespread belief that the city lay underwater explains the predominance of finds from the necropolis, later reused in Perast and Kotor, which complicates interpretation. Although the issue of “pierres errantes” is relevant, most inscriptions come from Risinium and testify both to its history and to the Italian, Illyrian, and Greek origins of its inhabitants. Given the density of settlements in the Bay, attribution of scattered inscriptions to individual centers (e.g. Acruvium) requires further research. Presenting manuscript tradition and selected inscriptions highlights the need for interdisciplinary approaches in this cultural landscape.

Keywords: Bay of Kotor, Risan, Risinium, Perast, Latin inscriptions, A. Balović

Nell'ambito delle ricerche archeologiche nella città antica di Risano (Rhizon, Risinium) in Montenegro, svolte ormai più di vent'anni fa dal Centro delle Ricerche sull'Antichità nell'Europa Sud-Orientale dell'Università di Varsavia, era del tutto naturale l'interesse anche per le testimonianze epigrafiche provenienti da quest'importante centro urbano greco-illirico e poi romano, situato in fondo alle Bocche di Cattaro.¹ Le iscrizioni, registrate fin dai tempi di Ciriaco d'Ancona, costituiscono una fonte essenziale per la ricostruzione della storia antica di Risano ed un naturale complemento per le indagini archeologiche. Purtroppo questo materiale epigrafico è poco noto e studiato, soprattutto a causa della sua dispersione e difficoltà d'accesso. Tante iscrizioni

¹ KOVAČEVIĆ 2007; DYCZEK 2013; DYCZEK 2020; GAZIVODA 2021; GAZIVODA 2022.

pubblicate negli anni 1873–1902 nel terzo volume del *CIL* sono scomparse, mentre le pubblicazioni successive del materiale nuovo risultano non sempre affidabili, quindi rimane ancora essenziale la verifica attraverso la lettura delle lapidi ancora esistenti nei posti di conservazione che purtroppo a volte sono cambiati.²

Risinium era principalmente una città portuale e mercantile, dall'importanza ben presto notata dai mercanti italici e dallo stato romano presente sull'Adriatico, come testimoniarebbe la creazione del *municipium Iulium Risinium*, forse già attorno agli anni 30 a.C. durante le campagne illiriche del futuro imperatore Augusto, oppure persino di una colonia. La questione però non è chiara, perché nell'iscrizione dedicata a M. Flavius Fronto di Doclea del I sec. d.C. vengono nominate le sue diverse funzioni municipali a Narona, Epidaurum e Scodra, tutte descritte come colonie, al contrario di Iulium Risinium, dov'egli però era *duumvir*.³ Comunque lo sviluppo della città e del suo eventuale innalzamento al rango di colonia, forse già nel I sec. d.C., sarebbe suggerito anche da un'iscrizione funeraria di T. Claudius Maximus di Rogatica, se si accettasse l'interpretazione di Géza Alföldy; tuttavia i dubbi restano perché l'espressione *c(olonia) Ris(...)* si potrebbe riferire proprio a Rogatica.⁴

Inoltre, la presenza di T. Claudius Maximus, forse un rappresentante di una famiglia di Risinium nell'entroterra, nella regione di *Daesitiates*, di solito viene inserita nell'ambito dei contatti commerciali delle città marittime con l'entroterra, in cui un ruolo importante lo svolgevano i liberti delle famiglie imprenditrici. In questo modo si può spiegare per esempio l'attività di C. Manlius Honesimus nelle vicinanze di Sarajevo (Kiseljak), visto che questa famiglia è nota principalmente a Risinium e forse proveniva da Ostia.⁵

Indubbiamente la presenza di mercanti romani e italici nelle città della costa dalmatica crebbe dopo la battaglia di Pidna e le guerre con il re illirico Gentios, quando a Risinium, chiamata da Livio *urbs* (45, 26), stazionava la guarnigione romana e i *Rhizonitae* furono liberati dalle tasse. Successivamente il *conventus civium Romanorum* gettò le basi per l'organizzazione del *municipium*, o magari persino di una colonia. I mercanti che si stabilivano in città provenivano soprattutto dall'Italia meridionale e centrale, come suggeriscono i loro nomi, tra cui *Caesii*, *Egnatii*, *Lurii*, *Manlii*, *Minucii*, *Paconii*, *Publii*, *Statii*. Si può anche supporre un processo di romanizzazione della gente locale illirica, come testimoniano i *Plaetorii*, e forse gli *Iulii*. Gli arrivati dall'Italia e i loro discendenti appartenevano all'élite sociale e politica di Risinium ed erano loro aperte le cariche cittadine e la funzione di decurione, ma anche la possibilità di una carriera militare, di un avanzamento nello stato equestre e persino senatorio.⁶

Conviene sottolineare che il materiale epigrafico scoperto nella zona delle Bocche di Cattaro è stato sempre arbitrariamente diviso tra Risinium ed Acruvium, un'altra città vicina nominata nelle fonti letterarie e spesso identificata con Cattaro, importante centro medievale e moderno, dove tra l'altro si conservano tante iscrizioni scoperte in città e nei dintorni. Tuttavia tale identificazione di Cattaro, come anche del resto le sue origini antiche, ancora suscita dubbi, quindi rimane sempre la possibilità che le iscrizioni antiche che si trovano in questa città

² MARTINOVIĆ 2011; *AE* 2011, 883, 904–918.

³ *CIL* III 12695 = *ILS* 7159 (Doclea); STICOTTI 1913, no. 26, p. 170; PAVAN 1958, pp. 199–200; ALFÖLDY 1965, pp. 103, 141; WILKES 1969, pp. 207, 224, 255; ŠAŠEL Kos 2017, p. 174.

⁴ *CIL* III 2766/b = 8369 = 12748 = *ILJug* 1571 = *HD* 033828: *T. Cl(audio) Maximo dec(urioni) c(oloniae?) o civitatis?) Ris(ini?)*; ALFÖLDY 1961, pp. 129–130, nota 35; 1965, p. 141, nota 78; ALFÖLDY 1968, col. 1216; CONS 1881, p. 249, nota 2; PATSCH 1909, pp. 181–183:

“ist es nun aber glaubhaft, dass der Name des so fern, mit dem heutigen Risano in den Bocche di Cattaro identischen Risinium in Alt-Rogatica so geläufig war, dass man die Abkürzung Ris... verstand?” (p. 182); WILKES 1969, p. 255; JOVANOVIĆ 2007, p. 50, 60; MROZEWICZ 2014, p. 215.

⁵ *CIL* III 8379; ALFÖLDY 1969, p. 97, s.v. Manlius; WILKES 1969, pp. 255, 276; vedi *infra*.

⁶ ALFÖLDY 1965, p. 142; ŠAŠEL Kos 2017.

appartengano soprattutto alla categoria delle „pierres errantes”, provenienti tra l’altro dalla vicina Risano.⁷

Una situazione simile si osserva a Perasto, una cittadina sulle Bocche di Cattaro tra Risano e Cattaro, famosa nel Settecento per la sua scuola marittima, dove la presenza delle iscrizioni antiche, provenienti molto probabilmente da Risano, fu rilevata soprattutto per merito dell’arcivescovo di Antivari, Andrija Zmajević (1624–1694), e grazie al suo interesse per la storia locale e le diverse vestigia raccolte nel monastero benedettino sull’isola di S. Giorgio, dove era abate, oppure nella residenza familiare a Perasto. D’altronde anche il suo successore Vicko Zmajević (1670–1745), arcivescovo di Antivari, primate di Serbia e rappresentante della Curia Romana nei Balcani, o suo fratello Matija Zmajević (1680–1735), ammiraglio russo della flotta di Pietro II probabilmente contribuirono all’arricchimento delle collezioni familiari.⁸

In tutte queste località si nota il fenomeno abbastanza diffuso di inserire le lapidi antiche iscritte nei muri degli edifici moderni, delle chiese, ma anche delle case private, però nella zona delle Bocche di Cattaro stupisce che quest’usanza di chiaro valore culturale, nota soprattutto nell’Europa medievale,⁹ sia continuata ancora per secoli fino al Novecento. Per esempio a Risano si notano un frammento d’iscrizione monumentale trovato nel 1930 e sistemato all’entrata del locale ospedale (Fig. 1)¹⁰ e due piccole lastre conosciute già dalla 2 metà del XIX sec. nel muro esterno della casa privata, „im Hause Misić”: si tratta d’iscrizioni funerarie tipiche dei colombari del I sec. d.C., una dedicata a C. Minidius Primigenius,¹¹ l’altra a Plaetoria Posilla (Fig. 2).¹²

Tutto considerato quindi è logico che la maggior parte delle iscrizioni recuperate sia finita a Cattaro, la città più importante della zona, che da fortezza tardoantica si sviluppò in un centro notevole della cristianità con la cattedrale di S. Trifone.¹³ Naturalmente la memoria del passato suscitava interesse per diversi motivi, anche storici, e le vicende del centro greco-illirico di Rhizon con la regina Teuta in guerra contro i Romani, in seguito annoverato da Plinio il Vecchio (NH 3, 144) tra gli *oppida civium Romanorum* sulla costa dalmatica, potevano riempire d’orgoglio i ricercatori del glorioso passato della zona delle Bocche di Cattaro.¹⁴

Il riferimento alle iscrizioni antiche inserite nei muri degli edifici moderni sembra derivare soprattutto dalla ricerca di un’identità culturale per dimostrare il legame forte degli abitanti con

⁷ TOMASCHEK 1914; OBERHUMMER 1914; ALFÖLDY 1968; CABANES, NESSELMANN 2001; PAVAN 1958, pp. 11–12; WILKES 1969, p. 256.

⁸ GLIUBICH 1856, pp. 320–322; MARTINOVIĆ, JOKSIMOVIĆ, KRSTIĆ 1971, p. 628; PIŽURIĆ 1989, pp. 7–28; ČORALIĆ 2004; MARTINOVIĆ, PŁÓCIENNIK 2016, pp. 274–276, nos. II-214, II-215, pp. 280–283, nos. II-221 – II-224.

⁹ PETRUCCI 2010, pp. 19–38.

¹⁰ ŠEROVIĆ 1962, p. 37; *ILJug* 635; DROBNJAKOVIĆ 2003, p. 104; MARTINOVIĆ 2011, pp. 41–42, no. 3; DYCZEK 2013, p. 19; GAZIVODA 2021, p. 198; *EDCS*-10000651; *HD* 033898: [---] *M(arci) · filio* I[---] | [---] *jus · oper*[---].

¹¹ *CIL* III 8398; EVANS 1883, p. 47, fig. 16; FRANKFURTER 1884, p. 106, no. 8; DROBNJAKOVIĆ 2003, p. 103, no. 19; MARTINOVIĆ 2011, p. 81, no. 54; *EDCS*-31400654; *HD* 062040: *C(aio) · Minidio | Primigenio | annorum · XXXX · | h(ic) · s(itus) · e(st)* ·. G. Alföldy suggeriva l’appartenenza di Minidius alla „Familie ostiensischer Herkunft” (ALFÖLDY 1969, p. 100, s.v. Minidius, p. 271, s.v. Primigenius); WILKES 1969, p. 255. In *OPEL* il nome Minidius è testimoniato soltanto in Dalmazia e appena due volte (*OPEL* III, p. 82, s.v. Minidius; Minidius – *CIL* III 8398, [M]inidius – *ILJug* 1883 = *CIL* III 8446). Invece il

cognomen Primigenius „denoting first-born” era particolarmente diffuso a Roma e, creato sul modello del Protonomus greco, rispecchiava l’attaccamento dei Romani ai soprannomi „relating to birth” (KAJANTO 1965, pp. 18, 74–75, 77, 134, 290; *OPEL* III, pp. 158–159, s.v. Primigenius).

¹² *CIL* III 8399; EVANS 1883, p. 47, fig. 17; FRANKFURTER 1884, p. 106, no. 7; DROBNJAKOVIĆ 2003, p. 103, no. 20; MARTINOVIĆ 2011, p. 81, no. 55; *EDCS*-31400655; *HD* 062039: *Plaetoria | M(arci) · filia) · Posilla | an(norum) · III · h(ic) · s(itus) · e(st)* ·. Qualche dubbio l’ha suscitato il *cognomen* Posilla, letto anche Posiita (Evans, Martinović, quindi *EDCS*: Posi {i}ta), però già O. Hirschfeld e S. Frankfurter suggerivano Posilla, accettato da G. Alföldy e *HD* (ALFÖLDY 1969, p. 269, s.v. Posilla; *OPEL* III, p. 154, s.v. Posilla), anche se questa è l’unica testimonianza in Dalmazia. Conviene anche notare il nome illirico Plaetoria, ben testimoniato in Dalmazia (vedi *infra*; ALFÖLDY 1969, pp. 109–110, s.v. Plaetorius, Pletoria: “in Dalmatia allem Anschein nach Eingeborene”; WILKES 1969, p. 255; *OPEL* III, p. 145, s.v. Plaetorius).

¹³ GELCICH 1880, pp. 64–71.

¹⁴ WILKES 1996, p. 574; CHANIOTIS 2019, pp. 156–158.



Fig. 1. Frammento architettonico con l'iscrizione dedicatoria, Risano (foto di J. Żelazowski).



Fig. 2. Piccole lastre funerarie nel muro esterno di una casa privata, Risano (foto di J. Żelazowski).

la civiltà occidentale, malgrado le vicende storiche. Lo prova per esempio il manoscritto settecentesco in italiano che contiene la storia di Perasto, conservato nel locale museo che custodisce attentamente la biblioteca e l'archivio della famiglia nobile di Viscovich.¹⁵ Questo testo, mai pubblicato per intero, è stato scritto da Andrija Balović (1721–1784), un poeta ed intellettuale appartenente alla nobile famiglia dei meritevoli capitani delle navi al servizio della Serenissima.¹⁶ Il manoscritto noto sotto il titolo di *Annali di Pirusto* (Fig. 3),¹⁷ nella parte dedicata alla storia antica si riferisce naturalmente a Risano e ai suoi monumenti, che dovrebbero provare le vere origini dell'identità culturale degli abitanti di Perasto, e le iscrizioni greche e latine citate nel testo dovrebbero testimoniare l'appartenenza tradizionale del luogo al "mondo occidentale" molto prima dell'arrivo degli Slavi. Per l'autore del manoscritto le rovine di Risinium sono ancora visibili e nello stesso tempo costituiscono una fonte di monumenti e materiali edilizi per gli abitanti di Perasto, ma anche della più distante Cattaro.

(p. 15) „Il tutto sin'ora detto serve a commun vantaggio e gloria de sudditi, al terror fondamentale dell'Ottomano, e a rissalto sempre maggiore della publica felicità. Risano moderno fra tanto, covile, e ricettacolo di gente feroce, facinorosa, sanguinaria, e come disse Cicerone, *rapto vivere assueta*, ancora oggidì conserva qualche segnale di gloria, eclissa tra l'altro per le solite vicende de tempi, alle quali ogni parte del mondo è soggetta. S'osserva ancora la Fortezza, se bene demolita, ove ricoverassi Teuta Reina. Si vedono pure le vestigie del suo Palazzo vicino al fiume Rizonne, volgarmente chiamato tutto quel tratto Lopatnizze, ò sia Zcarine di grand'estensione, e pianura. Al p(rese)n(te) per la comprata fatta da Ten(ente) Co(lone)llo Nicolo Rizzo, Gov(ernator)e di Risano, sono proprietarii, e possessori i nobili Pirustinni Stoisch Bujevich, conti feudatarii di Combur. Si ritrovano pure al giorno p(rese)nte le monete della regina Teuta, e molte altre di oro, d'argento e di rame de Romani, sì nel tempo della Republica, come nel tempo d'Imperatori, e dell'Occidente, e d'Oriente, così pure di Alessandro Magno. Anzi io n'ho veduto una d'argento, con caratteri Greci, che diceva, *Ἀλεξανδρος Βασιλεως*, Alessandro Rè. Di mosaico inoltre antico, e rovinato dal tempo, con l'incombenza spirituale, che hò da parecchi anni di Miss(ionari)o, e Preposito Rizoniense, destinato dalla S. Congreg(azion)e e Capellano pro tempore di quel Pressidio de Soldati Nazionali, ne hò veduto in diverse occasioni molti pezzi grossi, i quali presentem(ente) sono incastrati nel muro dell'Atrio della Chiesa di S. Pietro. Di queste monete antiche trovate a Risano molti dilettranti dell'antichità fecero diligente provista, e trà questi il Sig(no)r Co(n)te Gio(vanni) Bujevich, i Sig(nor)i Bucchia, Gov(ernato)ri di Risano, Ten(nent)e Co(lone)llo Nicolò Rizzo, Monsig(no)r Arciv(escov)o Zmajevic, e Cap(ita)n Zuane Zambella. Ma quello, ch'è il più mirabile trà tante statue, lumi perpetue, e sepolcri de antichi pagani, ed idolatri, si trovò da sotto terra chiuso in una scattola di rame un idoletto d'oro finissimo della grandezza d'un dito, fabbricato con rara manifattura, e a forza di ordigni di dentro, che moveva con la testa, mani, e piedi. Da un zappatore ignaro di tal antichità ne fù per poco dinaro fatto di donnavo al Co(lone)llo Nicolò Metcovich Chielovich ed il Sig(no)r Don Matteo Zambella m'assicurò assieme con molti altri d'esser stato di ciò testimonio oculare,

¹⁵ VISCOVICH 1898.

¹⁶ *Annali di Pirusto*, p. 3: (...) "compilato, ed accresciuto di varii notabili guerrieri successi da D. Andrea Zubazzi, ò sia Dentali Ballovich, Alunno del Colleggio Illirico di Loreto, Dottor di Filosofia, e della Sacra Teologia, Predicatore, Missionario, e Preposito dell'antico Rizonno, ò sia Risano, e Nobile di Pirusto"; VISCOVICH 1898, p. 238: "Il dott. D. Andrea Ballovich, che scrisse dopo la metà del passato secolo un'istoria di Perasto che si conserva nel manoscritto originale, ma che non fu mai data alle stampe (...)"; *HBL*, s.v. Balović (Ballo, Ballovich), s.v.

Balović, Andrija (Ballovich, Andrea); MILOŠEVIĆ 1980, p. 465.

¹⁷ Menzionato anche come *I fasti di Perasto* (GELCICH 1880, p. 7), anche se per l'autore in realtà s'intitola: *Veridico e fedel Racconto Historico, ò sian Annali della valorosa Nobile Nazione Pirustina, (...) fedelissimi Sudditi, e Nobili Confalonieri della Serenissima Republica di Venezia*, in breve *Annali di Pirusto*, come nell'inventario del museo *Peraški anali* no. LXII; vorrei ringraziare Janusz Reclaw e Aleksandra Simeunovic per il cordiale aiuto nell'accesso al manoscritto e i tanti preziosi consigli.

alloraq(uan)do fù portato in un occasione dal suo padre. Le statue poi, e le lapidi ritrovate ivi con le loro antiche iscrizioni latine dei Romani, sono state, posso dire, in buon numero e quantità. In poche parole, ove una volta nell'antico Rizonnio sorgevano nobili edificii, in adesso con luttuosa, strana metamorfosi corre l'aratro, e la zappa. Imperciocché corre la fama, e con qualche fondamento, che l'antico Rizonnio, ò a motivo delle aque sotteranee, ò per causa del terremoto una buona, e miglior parte d'esso s'avesse sproffondato, ed abissato nel mare, vedendosi ancora oggidì a giorno tranquillo, e a mar placido le mura rovinate di molte case. In occasione di questo eccidio, e rovina infelice dell'antico (p. 16) Rizonnio, quelli, che rimasero superstiti al grande flagello del Sig(nor)e pur troppo irritato dalle nostre colpe, si ricoverarono per la poca distanza d'un miglio, e mezzo a Pirusto, ampliandosi molto in allora questa patria, così pure a Cattaro, il quale per le rovine di Risano crebbe molto."

D'altronde la consapevolezza delle rovine sommerse di Risano era ancora viva nell'Ottocento e conviene citare a questo proposito la storia raccontata da Alessandro Goracuchi nel 1878: "A giudicare dall'area coronata da monti e resa angusta dal mare, l'antico Rhizinium non sembra che potesse avere avuto una grande estensione, per quanto ricco e forte fosse pur stato. Se non che con onda tranquilla, per la limpidezza dell'acqua penetrando la luce fino al fondo, si scorgono estese tracce di edificii; e non ha guari è riuscito al signor Alessandro Paprenizza di sollevare, mediante un congegno di funi con uncini, il capitello d'una colonna che conservasi in Risano nella casa del di lui figlio, ciocchè parla chiaramente in favore della maggiore estensione della città, che sarebbe stata ingojata dal mare per terremoto, a cui, come anche alla peste, andò soggetta al pari di Cattaro".¹⁸

Mantenuta per secoli e similmente motivata, la sensibilità per gli antichi resti è particolarmente visibile nell'attività di Josip Jelčić, proveniente da Cattaro (Giuseppe Gelcich, 1849–1925), „professeur au gymnase de Raguse (Dubrovnik)",¹⁹ e autore delle *Memorie storiche sulle Bocche di Cattaro*, il quale ebbe molti meriti nella registrazione del materiale epigrafico e rimase in contatto con molti studiosi.²⁰ Dunque all'inizio del Novecento le autorità di Cattaro cominciarono a misurarsi con l'idea di organizzare un lapidario in una delle chiese abbandonate, dando il via così al peregrinare dei monumenti alla ricerca di un posto definitivo, cosa praticamente ancora in atto e a cui contribuì anche il tragico terremoto del 1979 e il danneggiamento dell'edificio del locale Museo Marittimo. In attesa di una collocazione definitiva una parte del materiale epigrafico viene raccolta dal 2004 nella chiesa sconsacrata di S. Michele, adattata ad esposizione museale.²¹

La maggior parte delle iscrizioni latine conservate ha carattere funerario, il che suggerisce che nei tempi moderni l'antica città di Risinium era relativamente meno accessibile rispetto alle sue necropoli. Praticamente manca il materiale votivo, con l'eccezione della nota dedica a Iuno Lucina, adesso conservata a Cattaro nell'ufficio di restauro, ma „trovanti sull'isolotto Otok presso Krtole, nella baja di Teodo, nelle Bocche di Cattaro" (Fig. 4),²² praticamente unica testimonianza in Dalmazia di un culto caratteristico per l'Italia,²³ tralasciando la questione del culto locale del dio Medaurus, testimoniato nella tanto discussa iscrizione metrica di Lambaesis.²⁴ Gli epitaffi costituiscono però una fonte preziosa per le ricerche onomastiche e i nomi degli abitanti di Risinium testimoniano la loro origine diversa; la maggior parte proveniva da varie regioni

¹⁸ GORACUCHI 1878, p. 121.

¹⁹ CONS 1881, p. 250.

²⁰ GELCICH 1880; LEMKE 2014, pp. 74–75.

²¹ MARTINOVIĆ 2010.

²² BULIĆ 1903, p. 146 (*AE* 1904, 12).

²³ *ILJug* 1856; MARTINOVIĆ 2011, no. 6, pp. 43–44; *EDCS*-10100811: [---] | [Stat]a · L(uci) · f(ilia) | Cle-

mentia | Iunoni · Lucin[ae] |^s v(otum) · s(olvit) · l(ibens) · m(erito); JOVANOVIĆ 2007, p. 48, 57; M. ŠAŠEL KOS 1999, p. 188; LA ROCCA 1990, pp. 833–835.

²⁴ DYCZEK *et alii* 2010; 2014; KOLENDO *et alii* 2013.

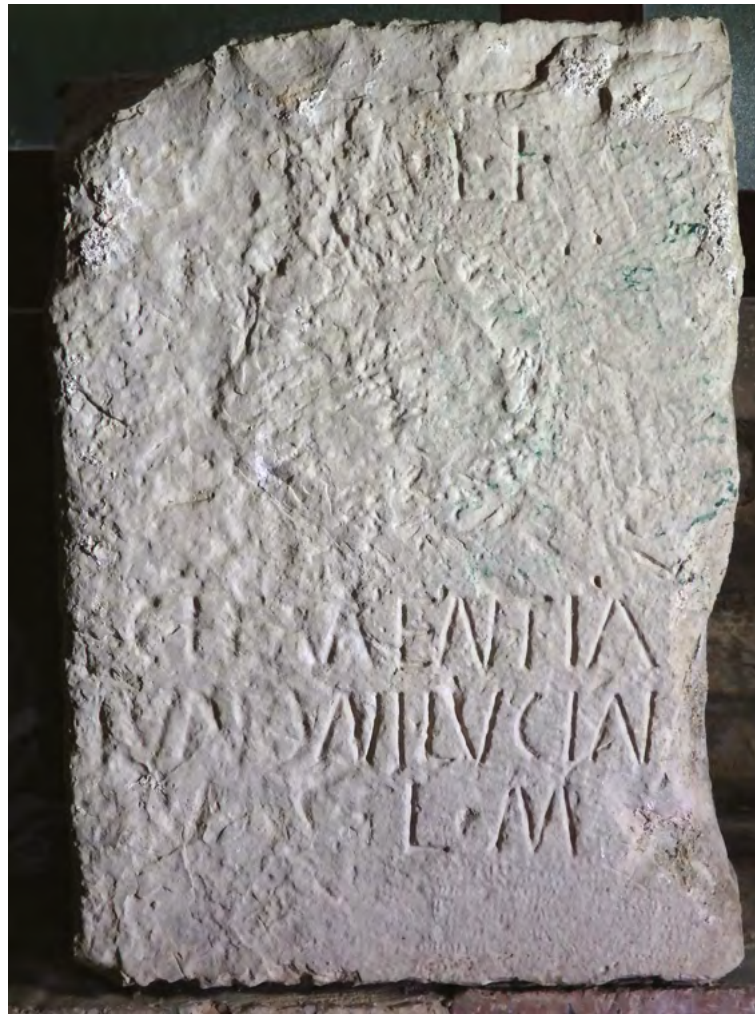


Fig. 4. Altare con la dedica a Iuno Lucina, Cattaro (foto di T. Płóciennik).

dell'Italia, anche se non bisogna dimenticare i processi di assimilazione e romanizzazione degli abitanti illirici e la presenza costante delle genti di stirpe greca.²⁵

Tuttavia negli *Annali di Pirusto* le iscrizioni hanno soprattutto un valore culturale e storico. “Nel rimanente poi gli antichi Pirustinni, e Rizonniti, oltre la barbarie commune già à tutti gli Illirici, furono assai rozzi, ed illetterati. Non ebbero in uso altra lingua, che la loro antica, e nativa Illirica e Slava, avendo pure in uso etiandio la Latina per la vicinanza, come s'è detto, ch'avevano alla città maritima dell'antico Rizonnio, colonia de Romani. Imperciocche per testimonianza dell'Orbini, e d'altri scrittori in alcune città marittime della Dalmazia, nelle quali erano colonnie de Romani, si parlava in lingua Latina, le quali città e colonnie poi, q(uan)do furono occupate da gli Slavi l'anno del Sig(nor)e 606, totalm(ente) s' estinsero. Ciò accadde in oltre, perche li Gothi, Nazion Slava, e Popoli Settentrionali rendendosi patroni di molte città d'Italia, talm(ent)e l'assalirono, e devastarono in molte parti, che rimase quasi del tutto spento l'antico splendore Latino. Ed in questo tempo dalla venuta de Gothi nel Latio, come si dirà in meglio in appresso, si guastò la Lingua Latina, e ne derivò per mottivo loro l'Italiana favella, la quale in oggi fiorisce assaissimo, e per parte de Letterati è giunta a somma perfetione. L'uso poi della

²⁵ WILKES 1977.

Lingua Latina antedetto con li suoi Grecismi, si prova chiaram(ent)e da molte iscrizioni Latine, e carte parimenti Latine in Carta Pergamena, che esistono tuttavia a Perasto, nel Monasterio e Chiesa Abbatiale di S. Georgio, e nell'Arcivescovato pure Zmajevich, le quale in diversi tempi si sono ritrovate in queste parti. La sopra tutte le altre è portentosa l'Inscrizione in una lapide inserita nel muro della Casa del Consiglio, la quale denota l'uso dell'antico Agape de Greci presso i Romani, il quale poi ereditando li Pirustinni, lo anno sempre usato nelle occasioni Funebri a S. Georgio sino la mia Gioventù, chiamandolo corrottamente Caritad (Fig. 5); sebene adesso sia intieram(ent)e abolito e perche fa molto a proposito la prefata Inscrizione Latina, ho giudicato cosa assai espediente inserirla quivi per appagare il genio del curioso lettore, ed è la seguente “ (p. 16).

Si tratta di un'iscrizione trovata secondo la tradizione “nella città di Risano posta nella facciata della chiesa di S. Pietro dagli habitatori Christiani, perchè fusse d'ornamento essendo in pietra di marmo alta palmi 4 ½, lunga 15. Ultimamente nell'a. 1660 ritrovata dal Signor Abbate [Andrija Zmajević] di Perasto, fu trasferita in Perasto”,²⁶ “facendola incastonare sopra la porta d'ingresso del vecchio consiglio dove attualmente si vede”,²⁷ effettivamente conservata fino ad oggi nel muro esterno delle adiacenze della chiesa di S. Nicola a Perasto (Fig. 6).

L'iscrizione monumentale²⁸ presenta la carriera piuttosto regolare di Q. Manlius Rufus, iscritto alla *tribus Sergia*, tipica dei cittadini di Risinium. Quest'aristocratico municipale con la funzione di decurione della città, in seguito alla funzione giudiziaria a Roma (*iudex ex V decuriis*), che però non richiedeva il viaggio nella capitale, fu promosso dall'imperatore allo stato equestre (*equo publico*).²⁹ Tale mobilità sociale riguardava le persone molto ricche e in questo caso il lascito testamentario è particolarmente consistente. La formula *testamento fieri iussit et epulo dedicari* non dovrebbe suscitare dubbi, perchè anche dopo la morte del figlio era sempre la madre Statia Fida che poteva provvedere alla realizzazione del lascito e all'organizzazione di *epulum*.³⁰ Ella aggiunse (*adiecit*) 35 mila sesterzi e pagò al fisco il 5% della tassa testamentaria di 13200 sesterzi, quindi sulla cifra di 264 mila sesterzi. In realtà, come ha già contato Theodor Mommsen, l'intera fondazione ammontava a 300 mila sesterzi e con questi soldi si poteva costruire l'acquedotto, il teatro, oppure sistemare il centro della città, anche se nell'iscrizione si nomina soltanto un non precisato *opus*.

Ultimamente questa tradizionale interpretazione dell'iscrizione è stata messa in dubbio da Marjeta Šašel Kos, che propone di intendere che dall'investimento fossero rimasti 20 mila sesterzi (*XX fisco*) e Statia Fida avesse pagato non la *vicesima hereditatium* allo stato, ma una cifra di 13200 sesterzi al fisco municipale, cioè esattamente il 66% della somma rimanente, come ulteriore atto di evergetismo da parte della famiglia.³¹ Si può presupporre che l'iscrizione decorasse un edificio costruito sul suolo pubblico (*solo publico*), ma poteva anche provenire dal monumento che commemorava il fondatore, quindi il lascito testamentario poteva anche riguardare i diversi aspetti delle finanze della città. Tuttavia a volte proprio l'investimento edilizio prolungato nel tempo richiedeva la necessità di un aumento del budget previsto.³² Conviene anche dire che tanto il nome di Statia Fida s'iscriveva bene nella locale onomastica, quanto invece il *nomen gentile*

²⁶ GORACUCHI 1878, pp. 120–121; GELCICH 1880, no. 45, pp. 27–28.

²⁷ RAFFAELLI 1844.

²⁸ CIL III 1717, p. 1028; MARTINOVIĆ 2011, no. 1, pp. 38–39; TOLSA DOMÉNECH 2011, no. 7, p. 189; ŠAŠEL KOS 2017, no. 1, pp. 175–176; GAZIVODA 2021, p. 197; PLÓCIENNIK, ŻELAZOWSKI 2021, pp. 200–201; EDCS-7400557; HD 053192: *Q(uintus) Manlius Q(uinti) f(ilius) Serg(ia tribu) Rufus | dec(urio), iudex ex quinq(ue) decuriis, equo publico, | testamento fieri iussit | et epulo dedi-*

cari. | In hoc opus Statia Sex(ti) f(ilia) Fida mater adiecit HS XXXV (milia) et summae operi et epulo relictæ | XX (vicesimam) fisco intulit HS XIII (milia) CC. Solo publico. ²⁹ CIL III 1711; MARTINOVIĆ 2011, no. 82, pp. 97–98; HD 053186 (C. Clodius Vitellinus, *duumvir i.d., iudex ex quinque decuriis, equo publico*); PFLAUM 1968; BURNAND 1974; DEMOUGIN 1975; RODRÍGUEZ NEILA 1978.

³⁰ CIL III 1710; DONAHUE 2004, no. 51, p. 154.

³¹ ŠAŠEL KOS 2017, pp. 175–176.

³² SAASTAMOINEN 2010, pp. 326–367.



Fig. 6. Lastra con iscrizione dedicatoria, Perasto (foto di J. Żelazowski).

Manlius era poco testimoniato in Dalmazia, suggerendo relazioni più complesse in quest'abbiente famiglia, notata dall'amministrazione imperiale.³³ Di solito se ne presuma la provenienza da Ostia, o persino i legami con il *corpus maris Hadriatici*.³⁴ L'iscrizione viene datata paleograficamente al I sec. d.C., oppure alla 1 metà del II sec. d.C., comunque dopo la riforma di Caligola delle cinque decurie dei tribunali di Roma.

Tuttavia quest'iscrizione tanto importante culturalmente per gli abitanti di Perasto non era intesa correttamente a suo tempo, come testimonia la sua trascrizione negli *Annali di Pirusto*, ma anche la traduzione in italiano, ripetuta nel manoscritto due volte: "Quinto Manlio, Quinto Fulvio, Sergio Ruffo, Decimo Giudice | De cinque Decurioni con giusto pubblico | Testamento comandò, che fosse fatto, e dedicato al Convitto Pubblico. | In quest'Opera Statia fedel Madre di Sesto Fulvio | Aggiunse Sestertii 25, et | Alla Summa dell'Opera | Et al Convitto Lasciati 20 al Fisco, ne diede Sester(t)ii 187" (pp. 16–17). Questa traduzione erronea dice molto sulla cultura epigrafica di Andrija Balović e dei suoi tempi, ma comunque l'insistenza sul termine *epulum*, noto da un'altra iscrizione di Risinium,³⁵ come testimone tra passato e presente, è molto istruttiva (Fig. 7).

Negli *Annali di Pirusto*, nelle pagine successive, vengono trascritte anche altre iscrizioni, a volte con spazi vuoti lasciati nel manoscritto per commenti, che poi non sono mai stati forniti. Sembra che Andrija Balović si sforzasse di leggere le iscrizioni direttamente sulle lapidi e non

³³ Vedi *infra*; OPEL III, p. 51, s.v. Manlius (CIL III 1717, 8379); II, 140, s.v. Fida; IV, pp. 35–36, s.v. Rufus.

³⁴ ALFÖLDY 1969, p. 97, s.v. Manlius: "In Risinium vielleicht eine Familie ostiensischer Herkunft. Der Libertus in Kiseljak war wohl Freigelassener dieser Familie" (CIL III 8379), p. 203, s.v. Fidus; PAVAN 1958, pp. 199–200;

ALFÖLDY 1965, p. 142; WILKES 1969, p. 255; ŠAŠEL KOS 2017, p. 175.

³⁵ CIL III 6359, p. 1491; MARTINOVIĆ 2011, pp. 39–41, no. 2; ŠAŠEL KOS 2017, p. 176, no. 2; EDCS-30600140; HD 058509.

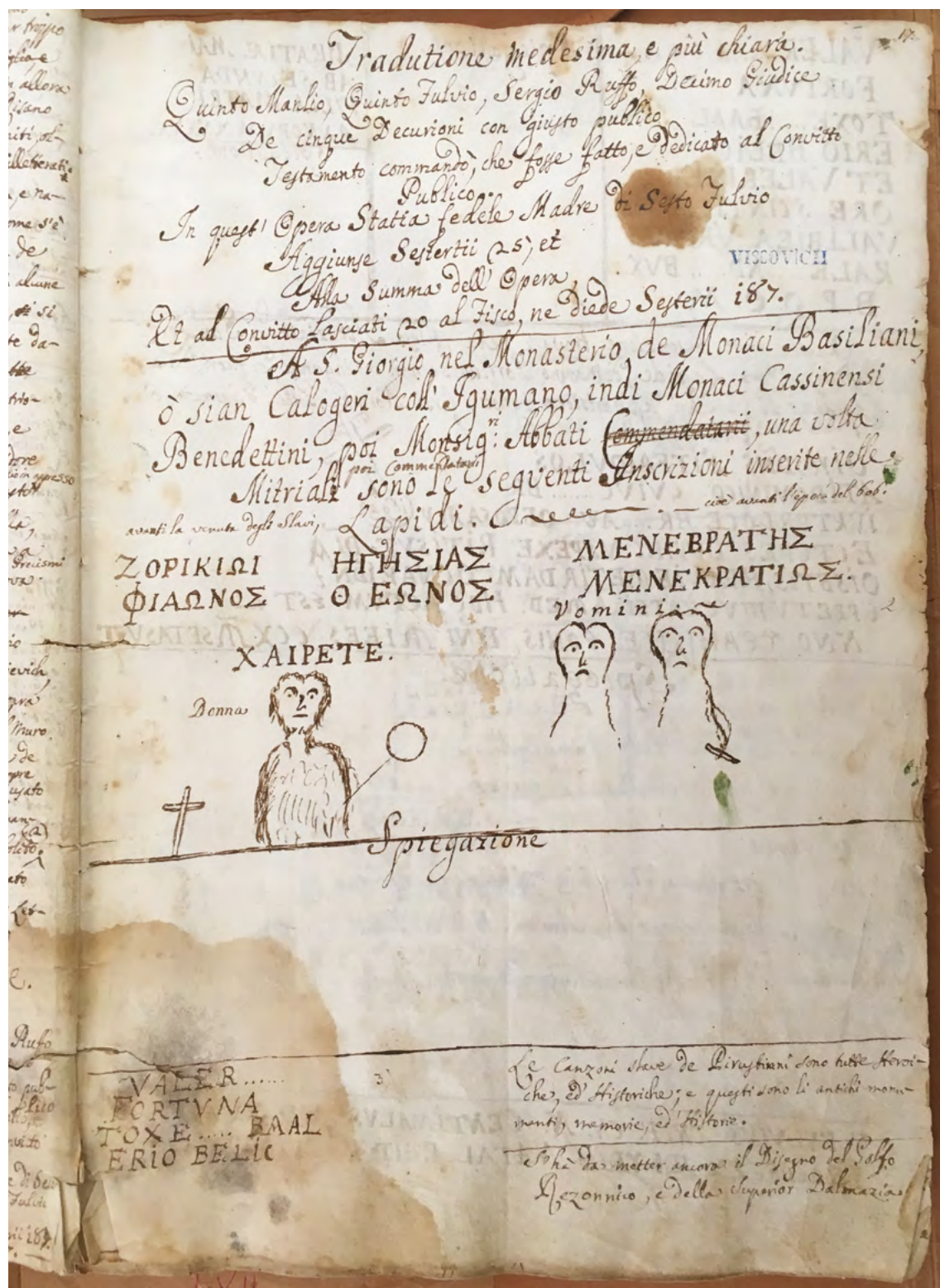


Fig. 7. Annali di Pirusto, p. 17 (foto di J. Żelazowski).



Fig. 8. Lastra funeraria iscritta in greco, Cattaro (foto di J. Żelazowski).

fosse supportato dalla tradizione manoscritta, quindi spesso si doveva arrendere e trasmettere i testi che non capiva. Tuttavia le iscrizioni in questione erano note e trascritte in precedenza, come testimonia per esempio il fascicolo secentesco di Nicolao Vrachien mandato all'illustre studioso Sertorio Orsato di Padova.³⁶

Negli *Annali di Pirusto* la presenza delle iscrizioni viene segnalata in due posti: al monastero benedettino nell'isola di S. Giorgio e all'Arcivescovado di Zmajević a Perasto.³⁷ Nel primo posto si osserva soprattutto un noto epitaffio in greco, fortunatamente conservato fino ad oggi nel lapidario di Cattaro (Figs. 7–8),³⁸ un'iscrizione medioevale e anche altre due lapidi antiche. Si tratta di un epitaffio ancora conservato nel muro del monastero, la cui lettura purtroppo a causa del deterioramento non è sicura (Fig. 9).³⁹ Nella linea 7 è difficile decifrare il nome dopo Valeria, alcuni si sono arresi come il Vrachien ed *EDCS*, altri hanno tentato la lettura, come *Valeria [C]ae[ci]/[i]a* (T. Mommsen, Jovan J. Martinović), *Valeria Finita* (O. Hirschfeld, *HD*). Invece nella linea 8 la lettura *parentibus* viene confermata da Otto Hirschfeld (*certo legi adfirmans*, *HD*), anche se si nota la lettura *Marcel[l]ina*, promossa da T. Mommsen, J. J. Martinović. Invece l'altra iscrizione “alta similmente; larga meno d'un piede” sembra dispersa, anche se secondo Giuseppe Gelcich si dovrebbe trovare “nel cenobio di S. Giorgio”.⁴⁰

³⁶ PŁÓCIENNIK, ŻELAZOWSKI 2021.

³⁷ “A S. Giorgio nel Monastero de Monaci Basiliani, ò sian Calogeri coll'Igumano, indi Monaci Cassinensi Benedettini, poi Monsig(no)ri Abbati, una volta Mitriali poi Commendatarii sono le seguenti Inscrizioni inserite nelle Lapidi” (p. 17), con l'aggiunta tra parentesi: “avanti la venuta degli Slavi, cioè avanti l'epoca del 606”.

³⁸ LAJTAR, MARTINOVIĆ 2012, pp. 103–105, no. 7; PŁÓCIENNIK, ŻELAZOWSKI 2021, p. 199.

³⁹ *Valerio / Fortuna/to et Vallerio Felici | et Valeriae | Crescentillae | Valeria [Finita?] | parentibus | b(ene) m(erentibus)* – *CIL* III 1735, p. 1028, p. 1491 = 12786; GELCICH 1880, p. 21, no. 19; MARTINOVIĆ 2011, p. 80, no. 53; PŁÓCIENNIK, ŻELAZOWSKI 2021, pp. 197–198; *EDCS*-27400577; *HD* 053207.

⁴⁰ *CIL* III 1734, p. 1028 = 12785; GELCICH 1880, p. 21, no. 20; MARTINOVIĆ 2011, p. 101, no. 92: *Tifatiae(?) Amatlae Secunda | filia matri | annor(um) XXXXX*.

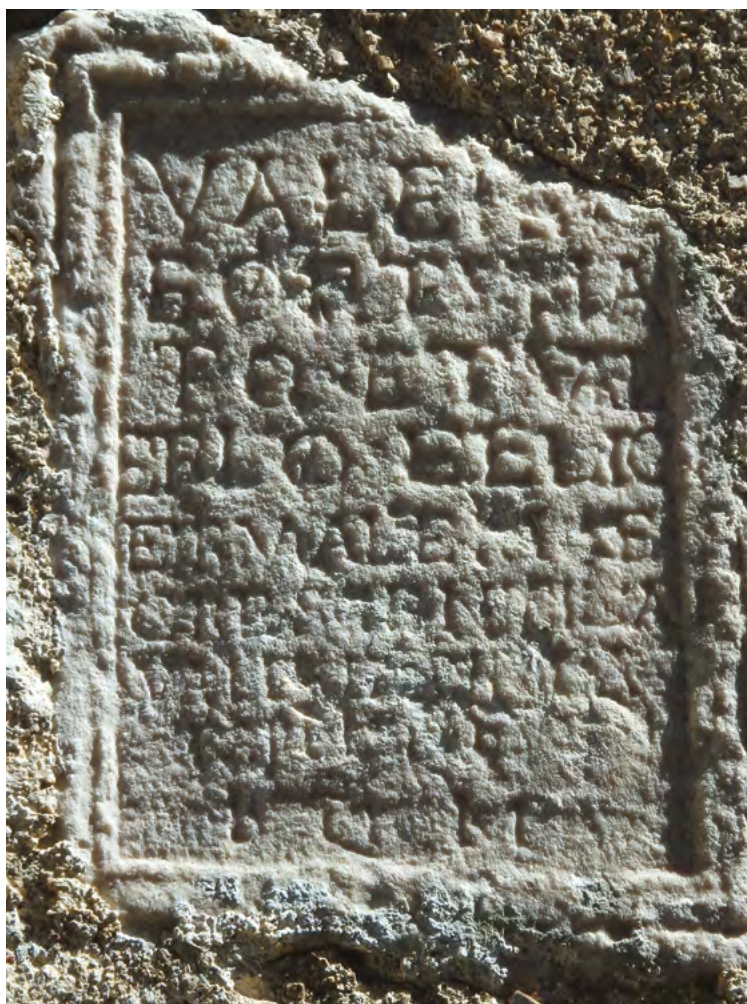


Fig. 9. Epitaffio dei Valerii, Isola di S. Giorgio a Perasto (foto di T. Plóciennik).

Negli *Annali di Pirusto* vengono segnalate più iscrizioni nell'Arcivescovado di Perasto, in parte ancora esistenti, come per esempio un cippo funerario, incastrato nel muro esterno del palazzo di Andrija Zmajević, anche se il suo stato di conservazione non permette più una lettura definitiva (Fig. 10).⁴¹ T. Mommsen, non convinto di leggere nella linea quarta *q(ui) vinxit*, lasciò irrisolto il dubbio trasmesso nella trascrizione e ancora attuale, sulle vicende di M. Caesius Niger.⁴²

Alcune iscrizioni menzionate nel manoscritto come conservate a Perasto, adesso si trovano nel santuario della Madonna di Scarpello sull'isola artificiale di fronte a Perasto, come per esempio una lastra calcarea trovata, secondo Nicolò Vrachien,⁴³ nel villaggio Orahovac situato tra Cattaro e Perasto, con l'iscrizione funeraria⁴⁴ di Ordionia madre al figlio omonimo Ordionius, con i nomi provenienti dal *nomen gentile* Hordonius (Fig. 11).⁴⁵ Negli *Annali di Pirusto* viene ancora trascritta un'altra iscrizione funeraria a suo tempo conservata all'arcivescovado Zmajević a Perasto,

⁴¹ *D(is) M(anibus) s(acrum) | M(arcus) Caes[i]us Nige[r] | q(ui) VIM XV | et vix(it) L – CIL III 1721, p. 1028 = 8389; GELCICH 1880, p. 25, no. 35; MARTINOVIĆ 1969, p. 176, no. 11; 2011, p. 66, no. 34; DROBNJAKOVIĆ 2003, p. 95, no. 5; GAZIVODA 2021, p. 200; PLÓCIENNIK, ŻELAZOWSKI 2021, p. 198; EDCS-27400573; HD 053196.*

⁴² ALFÖLDY 1969, p. 69, s.v. Caesius, p. 253, s.v. Niger; OPEL II, p. 20, s.v. Caesius, III, p. 101, s.v. Niger.

⁴³ PLÓCIENNIK, ŻELAZOWSKI 2021, pp. 196–197.

⁴⁴ *CIL III 1729, pp. 1028, 1491; GELCICH 1880, p. 26, no. 40; MARTINOVIĆ 2011, p. 82, no. 57; DROBNJAKOVIĆ 2003, p. 100, no. 9; EDCS-27400564; HD 053203: D(is)*



Fig. 10. Cippo funerario di M. Caesius Niger, Perasto (foto di T. Plóciennik).

e secondo Nicolò Vrachien pure trovata a Orahovac, che purtroppo non è più reperibile.⁴⁶ Similmente un altro epitaffio menzionato, trovato secondo la tradizione a Risano, sembra ormai perduto.⁴⁷

Invece nel santuario della Madonna di Scarpello si conserva l'iscrizione menzionata nel manoscritto, che a sua volta decorava l'entrata al palazzo di A. Zmajević.⁴⁸ Si tratta dell'epitaffio di Diocas (Diogenes) Cilix (Fig. 12).⁴⁹ Secondo G. Alföldy⁵⁰ la forma del nome Diogenes

M(anibus) s(acrum) | mater Ordionia | filio Ordionio caris(s)imo qui vixit | an(n)os XXVII.

⁴⁵ ALFÖLDY 1969, p. 256, s.v. Ordionius = der Gentilname Hordionius als *Cognomen*; Solin 2003, p. 1466; OPEL II, p. 185, s.v. Hordionius.

⁴⁶ CIL III 1732, p. 1028 = 8393; GELCICH 1880, p. 26, no. 38; MARTINOVIĆ 2011, p. 101, no. 91; EDCS 27400567; HD 053205: [...] *Stat[io-] f(ilio) Serg(ia) Valenti | patri ann(or)um LXIII | [et] Egnatiae L(uci) f(iliae) Bucculae | matri ann(or)um XXXXVII | [Va]lentinus et Crassus | [---] parentibus suis fecerunt.*

⁴⁷ CIL III 1728, p. 1028 = 8391; GELCICH 1880, p. 22, no. 22; MARTINOVIĆ 2011, pp. 100–101, no. 90; EDCS-

27400564; HD 053202: *[G]naeus | Minucius | Lentinus | ann(or)um L h(ic) s(itus) e(st).*

⁴⁸ RAFFAELLI 1844, p. 58.

⁴⁹ CIL III 1719, p. 2130; GELCICH 1880, p. 26, no. 41; DROBNJAKOVIĆ 2003, p. 99, no. 2; MARTINOVIĆ 2011, p. 79, no. 51; EDCS-27400571; HD 053194: *Diocas · Dio- | caenu · Cilix | ann(or)um · XXXV* (Martinović: *ann(or)um XXXX*).

⁵⁰ ALFÖLDY 1969, p. 188, s.v. Diocas = Diogenes, p. 177, s.v. Cilix: “belegt auch in Italien und Africa”; cf. SOLIN 2003, pp. 248–251; OPEL II, pp. 100–101, s.v. Diocaenus, Diocas.



Fig. 11. Lastra funeraria di Ordionius, Santuario della Madonna di Scarpello, Perasto (foto di J. Żelazowski).



Fig. 12. Piccola lastra con l'iscrizione funeraria, Santuario della Madonna di Scarpello, Perasto (foto di J. Żelazowski).

dimostra la tradizione greca e il periodo piuttosto tardo, anche se per *HD* l'iscrizione viene datata al 151–250 d.C. Secondo Massimiliano Pavan,⁵¹ Cilix suggerisce una provenienza dalla Cilicia e l'iscrizione potrebbe testimoniare il carattere mercantile della città, dove non mancavano genti

⁵¹ PAVAN 1958, p. 199; cf. WILKES 1969, p. 256.



Fig. 13. Cippo funerario, Santuario della Madonna di Scarpello, Perasto (foto di J. Żelazowski).

dall'Oriente greco, anche se i nomi presi dai termini geografici non devono per forza dimostrare la provenienza di chi li porta.⁵²

Inoltre viene segnalato nel manoscritto un cippo funerario, pure conservato nel santuario della Madonna di Scarpello (Fig. 13).⁵³ L'ultima linea sul basso profilato non è più conservata, ma in precedenza si leggeva *anno[s]*, oppure *anno(s) XXXX* (J. J. Martinović, *EDCS*, *HD*). Invece il *cognomen* si decifrava come *Licentinus* (J. J. Martinović, *EDCS*), oppure più spesso come *Licentianus* (G. Gelcich, *CIL*, *HD*) e così viene di solito citato.⁵⁴ In Dalmazia esso viene registrato soltanto in quest'iscrizione, oltre al *cognomen* femminile *Licentina*.⁵⁵ D'altronde questi cippi erano popolari a Risinium nel II sec. d.C. e i *Caesii* provenienti dall'Italia sono testimoniati più volte a Risano.⁵⁶

⁵² SOLIN 2003, pp. 659–660; *OPEL* II, p. 56, s.v. Cilix (*ILJug* 1834 – Doclea).

⁵³ *D(is) · M(anibus) · s(acrum) · M(arcus) · Caesi- lus · Licen- ltinus vixit* |⁵ [...] – *CIL* III 1720, p. 1491; GELCICH 1880, p. 27, no. 42; MARTINOVIĆ 1969, p. 178, no. 15; DROBNJAKOVIĆ 2003, p. 96, no. 7; MARTINOVIĆ 2011, pp. 67–68, no. 36; *EDCS*-27400572; *HD* 053195.

⁵⁴ ALFÖLDY 1969, p. 230, s.v. *Licentianus*; KAJANTO 1965, p. 269.

⁵⁵ *CIL* III 2584; *OPEL* II, p. 20, s.v. *Caesius*, III, p. 26, s.v. *Licentianus*.

⁵⁶ *CIL* III, 1720, 1721 = 8389, 6360.



Fig. 14. Lastra funeraria, Santuario della Madonna di Scarpello, Perasto (foto di J. Żelazowski).

Similmente nel santuario della Madonna di Scarpello si trova un'altra iscrizione funeraria sulla piccola lastra calcarea menzionata nel manoscritto (Fig. 14).⁵⁷ L'integrazione del nome illirico Plaetorius⁵⁸ testimoniato a Risinium non suscita maggiori dubbi (*CIL*), ma l'abbreviazione nella linea 3 non è del tutto chiara—*h(ic) i(ntus?) s(itus) e(st)* ha già proposto O. Hirschfeld (J. J. Martinović, *EDCS*), però *HD* suggerisce *h(ic) i(lle?) s(itus) e(st)* con la datazione al I—metà del II sec. d.C.

Infine nel manoscritto vengono citate due iscrizioni note fin dal Seicento, ma considerate dalla fine dell'Ottocento false, che per secoli fornirono le prove dell'importanza delle Bocche di Cattaro nella storia romana (Fig. 15). Si tratta dell'urna di Centimalus trovata a Risano nel 1657, il cui frammento è conservato adesso nel santuario della Madonna di Scarpello (Fig. 16) e di un'altra di Sextus Bibulcus, secondo la tradizione scoperta nel 1647 a Budua, ma appartenente alla collezione di A. Zmajević, considerata perduta, invece ritrovata nel 2005 nel pozzo a Perasto e attualmente custodita a Cattaro nell'ufficio per la conservazione dei monumenti (Fig. 17).⁵⁹

La prima urna, vista da T. Mommsen ancora nel muro del Palazzo di Zmajević fu pubblicata come autentica, ma dopo la consultazione della tradizione scritta, che suggeriva che l'oggetto si potesse riferire a Gneo Fulvio Centimalo, console del 229 a.C. che combatté vittoriosamente contro la regina Teuta, menzionato da Floro (1, 21, 4), T. Mommsen si convinse che si trattava di un falso.⁶⁰

⁵⁷ *M(arcus) · Plaet[orius] | M(arci) · f(ilius) Sergia | h(ic) · i(ntus?) · s(itus) · e(st) · vixit an[nos] | XXV* – *CIL* III 1730 = 8392; GELCICH 1880, p. 26, no. 39; DROBNJAKOVIĆ 2003, p. 86; *AE* 2003, 1344; MARTINOVIĆ 2011, p. 80, no. 52; *EDCS*-27400575; *HD* 053204.

⁵⁸ ALFÖLDY 1969, p. 109, s.v. Plaetorius; *OPEL* III, p. 145, s.v. Plaetorius.

⁵⁹ PLÓCIENNIK, ŻELAZOWSKI 2021, pp. 195–196.

⁶⁰ *CIL* III 1727, pp. 1028, 1491 = *CIL* III *298; GELCICH 1880, p. 25, no. 36; HIRSCHFELD, SCHNEIDER 1885, p. 28; DROBNJAKOVIĆ 2003, p. 100, no. 7; MARTINOVIĆ 2011, p. 93, no. 76; *EDCS*-27400574. Tuttavia il *cognomen* Centimalus viene ancora notato a *OPEL* con il riferimento a quest'iscrizione – *OPEL* II, p. 50, s.v. Centimalus.

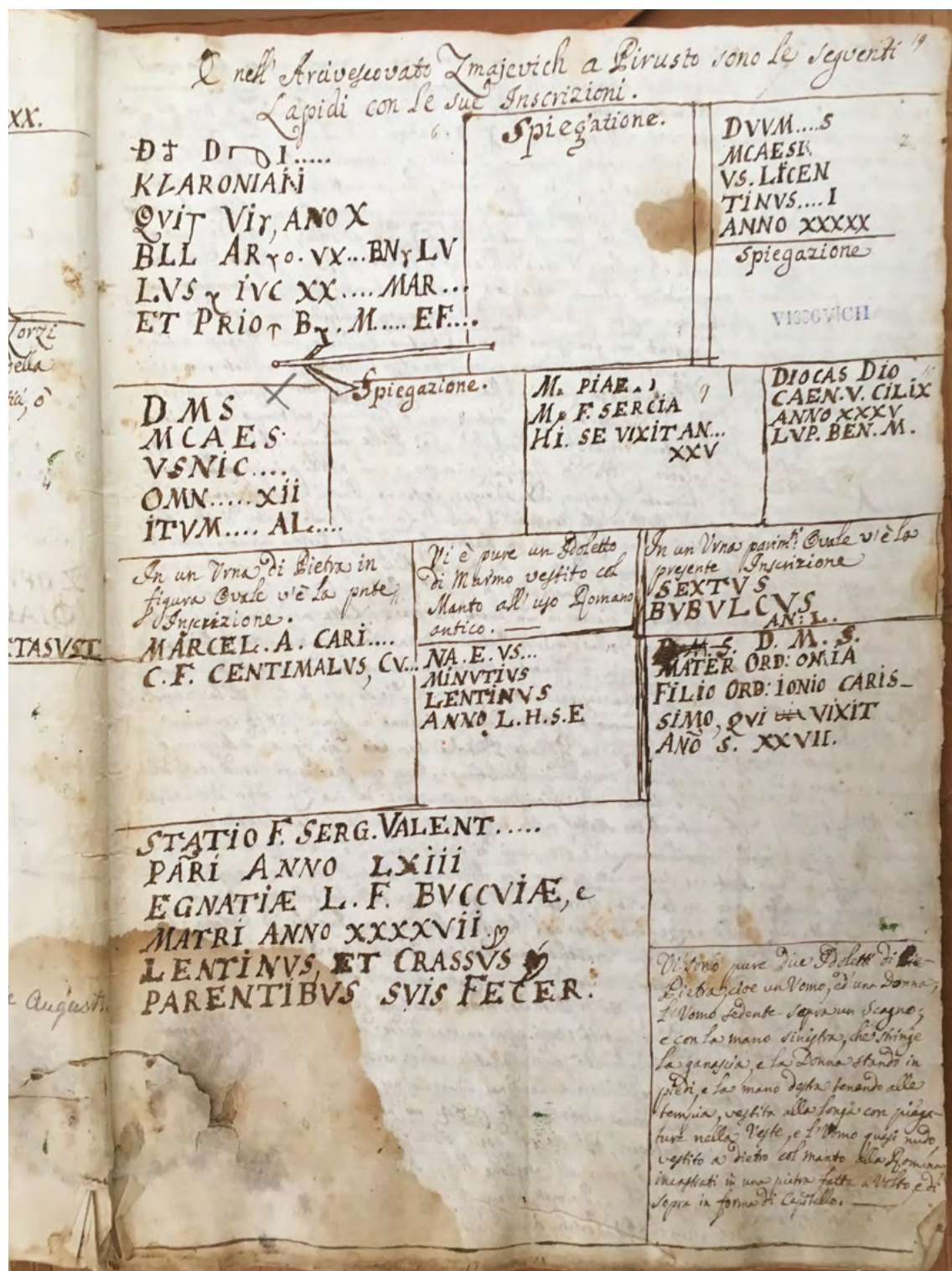


Fig. 15. *Annali di Pirusto*, p. 19 (foto di J. Żelazowski).

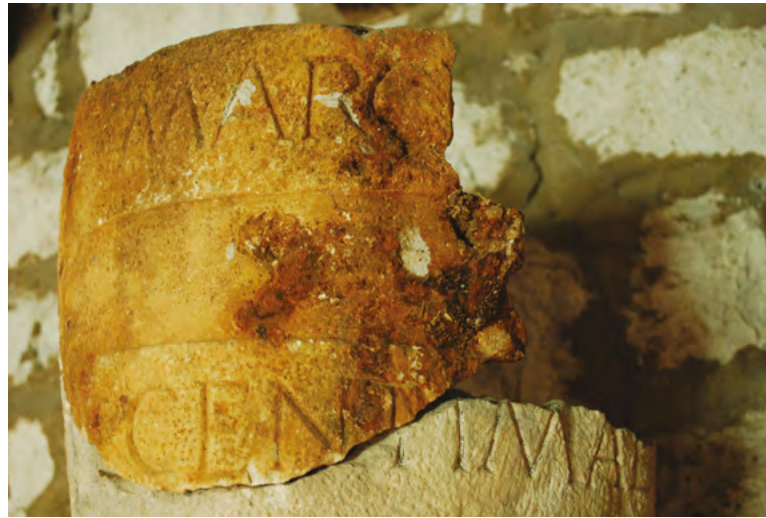


Fig. 16. Urna cineraria di C. Marcello Centimalo, Santuario della Madonna dello Scarpello, Perasto (foto di J. Żelazowski).



Fig. 17. Urna cineraria di Sesto Bubulco, Cattaro, (foto di T. Plóciennik).

Quest'opinione in seguito fu confermata da O. Hirschfeld nel 1885, con l'annotazione anche delle osservazioni di S. Frankfurter⁶¹ che supponeva che lo stesso falsario potesse aver eseguito anche un'altra urna a Sesto Bubulco.⁶² Pubblicata da T. Mommsen *inter Risanenses*, provenienza presto corretta,⁶³

⁶¹ FRANKFURTER 1884, p. 105, no. 5; HIRSCHFELD, SCHNEIDER 1885, p. 28.

⁶² *CIL* III 1731, pp. 1026, 1028, 1491 = *CIL* III 8280 = *CIL* III *300; GELCICH 1880, p. 26, no. 37; MARTINOVIĆ 2011, p. 95, no. 79; *EDCS*-27400566.

⁶³ *CIL* III 1731, p. 1028: *urna Buduae rep. a. 1647, dum fundamenta aedium ibi fodiuntur*.



Fig. 18a, b. Urna con coperchio contenente l'iscrizione funeraria (foto di J. Żelazowski).

pure quest'urna fu considerata falsa da O. Hirschfeld su suggerimento di S. Frankfurter e il *cognomen* Bubulcus presente nei fasti consolari⁶⁴ si potrebbe riferire alla menzione di Tito Livio (10, 2) sulla spedizione di C. Iunio Bubulco nell'Adriatico verso la fine del IV sec. a.C.⁶⁵

Conviene però ricordare che non si tratta di falsi sulla carta e le urne calcaree esistono realmente. Questa di Centimalo è conservata in stato frammentario ed è possibile adesso leggervi

⁶⁴ *OPEL* I, p. 130, s.v. Bubulcus, con riferimento soltanto a quest'iscrizione.

⁶⁵ WISEMAN 2014.



Fig. 19a, b. Urna con coperchio contenente l'iscrizione funeraria (foto di J. Żelazowski).

soltanto *C(aius) Marc[ellus ---] | C(ai) f(ilius) Cent[imalus ---]*, invece quella di Bubulco reca la seguente iscrizione: *Sextus | Bubulcus | ann(orum) LVI*. Vista la tipologia delle urne antiche locali non è da escludere che le iscrizioni siano state eseguite sugli oggetti originali.⁶⁶

In questo contesto conviene notare un'altra urna calcarea, simile a quella di Sesto Bubulco, trovata a Risano nel 1979 durante i lavori di sterro nel giardino del parroco Stanoje Škorić a 2 m. di profondità e conservata nella chiesa ortodossa dei SS. Pietro e Paolo (Fig. 18a, b).⁶⁷

⁶⁶ MARTINOVIĆ 2011, p. 94, no. 77.

⁶⁷ KOVAČEVIĆ 2007, p. 38; MARTINOVIĆ 2011, p. 94, no. 77; AE 2011, 917; GAZIVODA 2021, p. 201; EDCS-64100458.

Sul suo coperchio si legge: *Luscia* | *Maxi-* | *ma*, e si noti che il *nomen* *Luscius*, *Luscia* è piuttosto raro e testimoniato nell'Italia del Nord, mentre in Dalmazia soltanto a Risinium.⁶⁸ Insieme con quest'urna, nelle stesse circostanze e pure conservata nella chiesa dei SS. Pietro e Paolo, ne fu riscoperta un'altra, stavolta parallelepipedica con coperchio decorato da una rosetta, sul quale si legge: *Sex(ti) Ma[.] - | li Firmi* [Fig. 19a, b].⁶⁹ Finora l'iscrizione è stata di solito decifrata come *Sex(to) Man(lio) | d(omo) Sirmi(o)* e interpretata così che l'origine di *Sex. Manlius* di Sirmium suggerirebbe un ambiente militare e, prendendo in considerazione la carriera di Q. Manlius Rufus analizzata qui sopra, anche un avanzamento sociale della famiglia, cosa che forse dovrebbe essere corretta, anche perché la lettura del nome gentilizio *Manlius* sembra probabile, ma non del tutto sicura.⁷⁰

Comunque le iscrizioni antiche nelle Bocche di Cattaro, a prescindere dal loro valore per la storia della Risinium greco-romana, e forse anche delle altre località della zona, costituiscono una testimonianza del significato culturale delle epigrafi in epoca moderna: accompagnano gli abitanti e forniscono loro un elemento d'identità ed appartenenza al mondo occidentale. Di conseguenza la scrittura come tale, anche senza essere ben compresa, nell'antichità come nei tempi moderni, si presenta come un fenomeno culturale per la definizione dei valori che caratterizzano la nostra civiltà.⁷¹

Abbreviazioni

<i>AE</i>	L'Année Épigraphique, Paris.
<i>AEM</i>	Archaeologisch-Epigraphische Mittheilungen aus Oesterreich-Ungarn, Wien.
<i>ANRW</i>	Aufstieg und Niedergang der römischen Welt, Berlin – New York.
<i>CIL</i>	<i>Corpus Inscriptionum Latinarum</i> , Berlin.
<i>EDCS</i>	Epigraphik-Datenbank Clauss / Slaby.
<i>GPM</i>	Godišnjak Pomorskog Muzeja u Kotoru.
<i>HBL</i>	Hrvatski Biografski Leksikon, ed. Leksikografski Zavod Miroslav Krleža (Croatian Biographical Lexicon ONLINE, www.lzmk.hr)
<i>HD</i>	Epigraphische Datenbank, Heidelberg.
<i>ILJug</i>	A. i J. Šašel, <i>Inscriptiones Latinae quae in Iugoslavia repertae et editae sunt</i> , Ljubljana 1963–1986.
<i>ILS</i>	H. Dessau, <i>Inscriptiones Latinae selectae</i> , Berlin 1954–1962.
<i>LIMC</i>	<i>Lexicon Iconographicum Mythologiae Classicae</i> , Zürich – München.
<i>OPEL</i>	<i>Onomasticon provinciarum Europae Latinarum, ex materia ab A. Mócsy, R. Feldmann, E. Marton et M. Szilágyi collecta, composuit et correxit</i> , ed. B. LÖRINCZ, vol. I, <i>editio nova aucta et emendata</i> , Budapest 2005, vol. II, Wien 1999, vol. III, Wien 2000, vol. IV, Wien 2002.
<i>RE</i>	Realencyclopädie der classischen Altertumswissenschaft, Stuttgart.

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⁶⁸ *OPEL* III, p. 39, s.v. *Luscius* (*Luscia* – *CIL* V 1402, 2982, *Luscius* – *CIL* V 2982, *ILJug* 614, *Luscii* – *ILJug* 634).

⁶⁹ KOVAČEVIĆ 2007, pp. 36–37; MARTINOVIĆ 2011, p. 94, no. 78; GAZIVODA 2021, p. 200; *AE* 2011, 918; *EDCS*–64100459.

⁷⁰ *OPEL* III, p. 51, s.v. *Manlius* (*CIL* III 1717, 8379).

⁷¹ CORBIER 2006.

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Jerzy Żelazowski
 Facoltà di Archeologia
 Università di Varsavia
 j.r.zelazowski@uw.edu.pl
 orcid.org/0000-0002-8377-2609

Artur Brzóska

NON-INVASIVE UNDERWATER RESEARCH IN THE ANCIENT PORT OF PTOLEMAIS, LIBYA. NEW TECHNOLOGIES, NEW PERSPECTIVES

Abstract: Polish archaeological mission of the Faculty of Archaeology of the University of Warsaw led by Dr Piotr Jaworski and underwater reconnaissance led by Artur Brzóska worked in the ancient town of Tolmeitha, Libya, in June 2023. A total of about 5.5 km of coastline was explored, with particular emphasis on the harbour area. By employing a hydroacoustic device the team could create two maps. The first is a bathymetric map showing the depth distribution in the harbour and coastal area of the town. The second is a sonar mosaic that allowed anomalies on the bottom to be observed and tentatively interpreted. Thanks to the courtesy of the Tolmeitha Museum aerial photographs were taken with a drone and later compiled into an orthophotograph. Once all the data were integrated, a plan of the harbour with quays and breakwater was created, enabling reconstruction of the size of the harbour and its key installations.

Keywords: underwater archaeology, archaeology of Libya, antiquity, non-invasive archaeology, Ptolemais

Introduction

In June 2023, the Polish Archaeological Mission of the Faculty of Archaeology of the University of Warsaw, led by Dr Piotr Jaworski, worked in Tolmeitha, the site of the ancient town of Ptolemais. Underwater research was conducted by Artur Brzóska, whose aim was to identify the harbour structures and the coastal zone at the level of the town. The reconnaissance was performed in 500 metre wide strips of coastline with the combined total length of approximately 5.5 kilometres, with a particular focus on the harbour area.

History of research

The location and appearance of the harbour has been studied for many years by numerous researchers, such as Carl Hreman Kraeling,¹ who placed the harbour on the western side of the headland and the anchorage on its eastern side, André Laronde,² Monika Rekowska,³ Kazimierz Lewartowski,⁴ or Krzysztof Misiewicz.⁵

¹ KRAELING 1962, pp. 38, 48–51.

² LARONDE 1986, pp. 167–177.

³ REKOWSKA 2015, p. 199.

⁴ LEWARTOWSKI, MISIEWICZ 2015, pp. 133–141.

⁵ MISIEWICZ 2015.

⁶ JONES, LITTLE 1971.

In the late 1960s, the first regular underwater surveys were carried out by a team of British scholars.⁶ As part of a project to study ancient harbours in Cyrenaica, they also surveyed the one at Ptolemais. On the basis of these surveys and new data, a series of maps was produced,⁷ providing an important reference point for the current research.

In 2009, an Italian archaeological mission led by Carlo Beltrame carried out an underwater reconnaissance of the eastern bay, disproving theories about the western bay being the location of the main harbour. Their evidence includes fragments of a ship found on the eastern side of the headland—between the island (the smaller one, the first from the headland on the eastern side) and the mainland. However, this find remains undated.⁸

In 2020, a mission of Libyan archaeologists carried out an eight-day underwater search in the eastern bay discovering various artefacts, including Roman-era amphorae.⁹

Equipment and method

The survey used a hydroacoustic detection method to collect data allowing mapping of the water body. A Lowrance HDS 12 sub-bottom sonar was used for the underwater survey. In order to obtain a suitable sonar mosaic effect, a straight line was sailed along the shoreline, obtaining reasonably even images. When these were superimposed, a bottom image was created. Only inside the fishing harbour and around the pier was the sailing path perpendicular to the shoreline, due to the small space of these areas. At each stage, echo sounder information was collected in order to obtain as accurate a bathymetric map as possible. Surveys were carried out from the headland westwards to the rocky islet to the east of the town.

Results and conclusions

The study produced two maps. The first is a bathymetric map showing the depth distribution in the harbour as well as in the coastal area of the town. The second is a sonar mosaic, which allowed the observation of anomalies on the bottom and their preliminary interpretation. Thanks to the courtesy of the Tolmeitha Museum aerial photographs were taken using a drone and then compiled into an orthophotomap of parts of the harbour.

The (bathymetric) depth map shows the distribution of depths in the harbour and a strip of the adjoining coastline (Fig. 1). With it, the size of the harbour could be reconstructed. This is an important insight given the changes in the sea level, which has increased by two to four metres since Antiquity.¹⁰ It shows that the harbour was definitively smaller than the coastline suggests today.

The map of sonar traces allowed tracking anomalies and clusters of features that stood out from the background (Fig. 2). In most cases, these were natural rock formations. In one case, however, elements of a breakwater were found, located to the east of the ancient harbour (Figs. 3–4).

Once all the data had been integrated, a plan of the harbour with quays and breakwater was created, enabling reconstruction of its key installations (Fig. 5). The harbour was bounded to the west by a promontory, divided in the middle by an island and quay installations, and to the east by an island with a breakwater. The central island together with the quays divided the harbour into western and eastern basins. Both basins were accessed through entrances from the north. The western

⁷ YORKE, DAVIDSON 2017.

⁸ BELTRAME 2012, pp. 315–326.

⁹ EMRAGE, NIKOLAUS 2023, p. 162.

¹⁰ KRAELING 1962, p. 49; LARONDE 1989, p. 326.

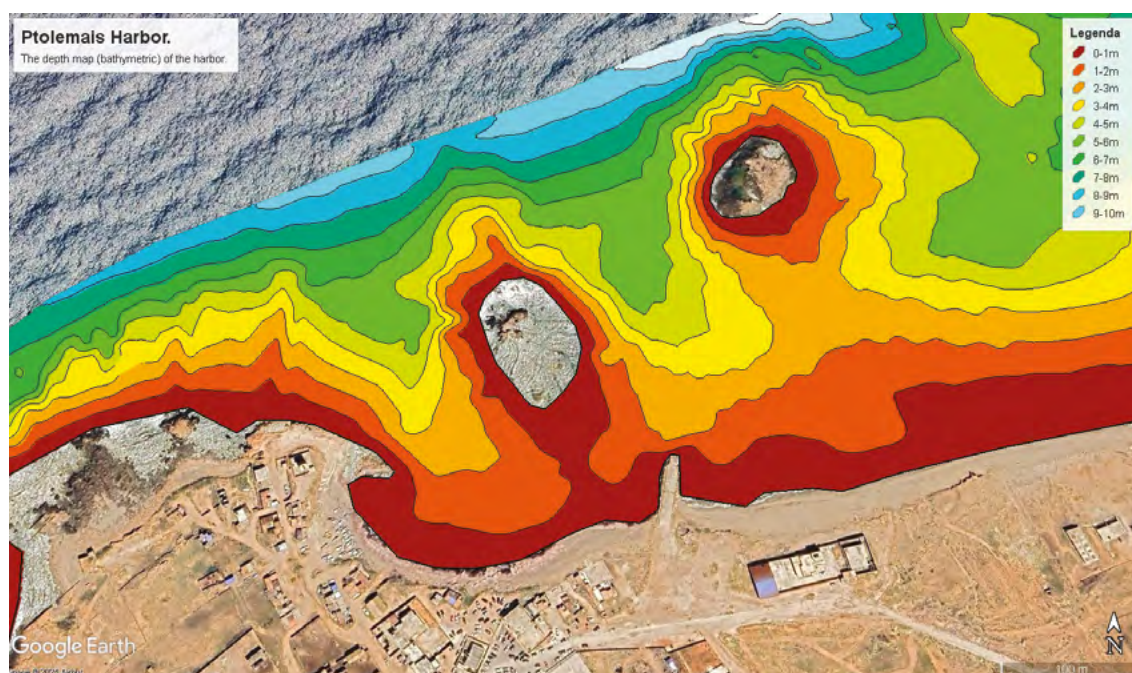


Fig. 1. Depth map (bathymetric) of the harbour (elaborated by A. Brzóska).



Fig. 2. Sonar mosaic map (elaborated by P. Prejs and A. Brzóska).

section measures 1 hectare (80×130 m) and the eastern section 3 hectares (180×190 m). The maximum depth reaches 5 metres. The division of the harbour space into two basins may have been related to the location of a military harbour in one of them, following the example of Apollonia.¹¹

¹¹ LARONDE 1989, p. 325.

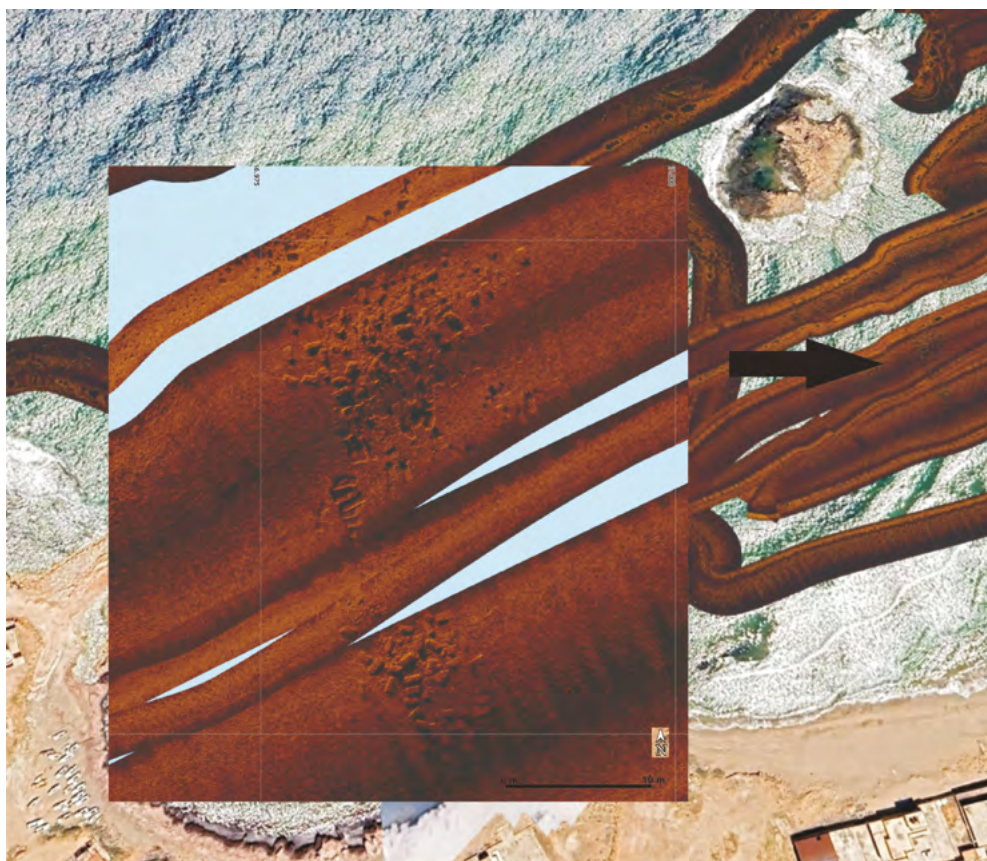


Fig. 3. Sonar mosaic map. Eastern breakwater (elaborated by P. Prejs and A. Brzóska).

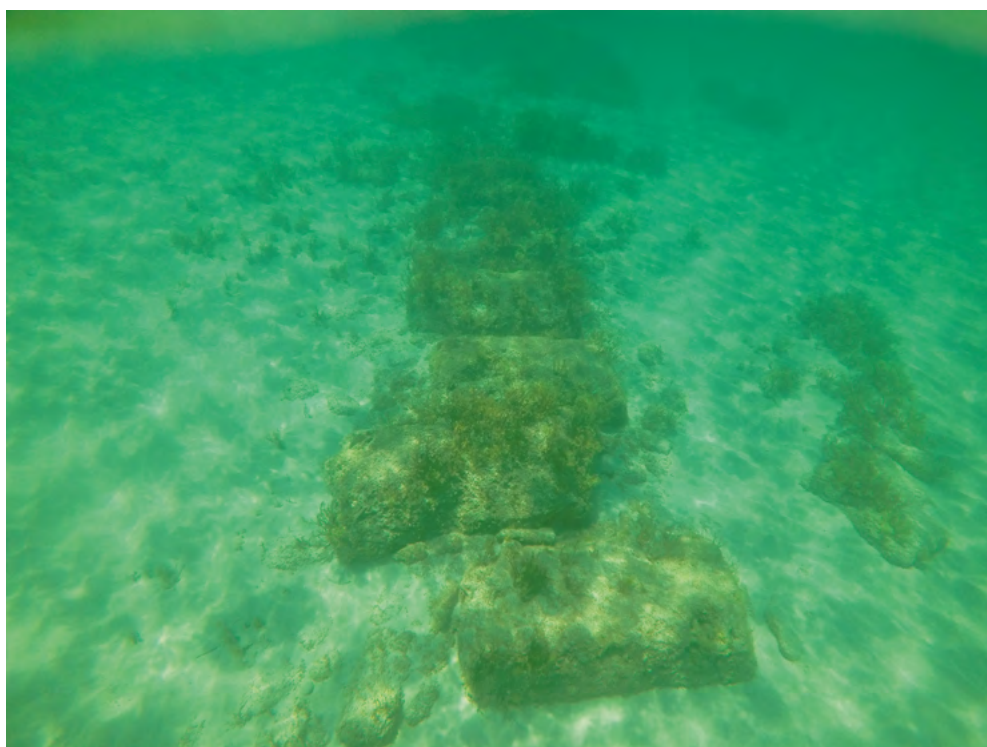


Fig. 4. Eastern breakwater (elaborated by A. Brzóska).

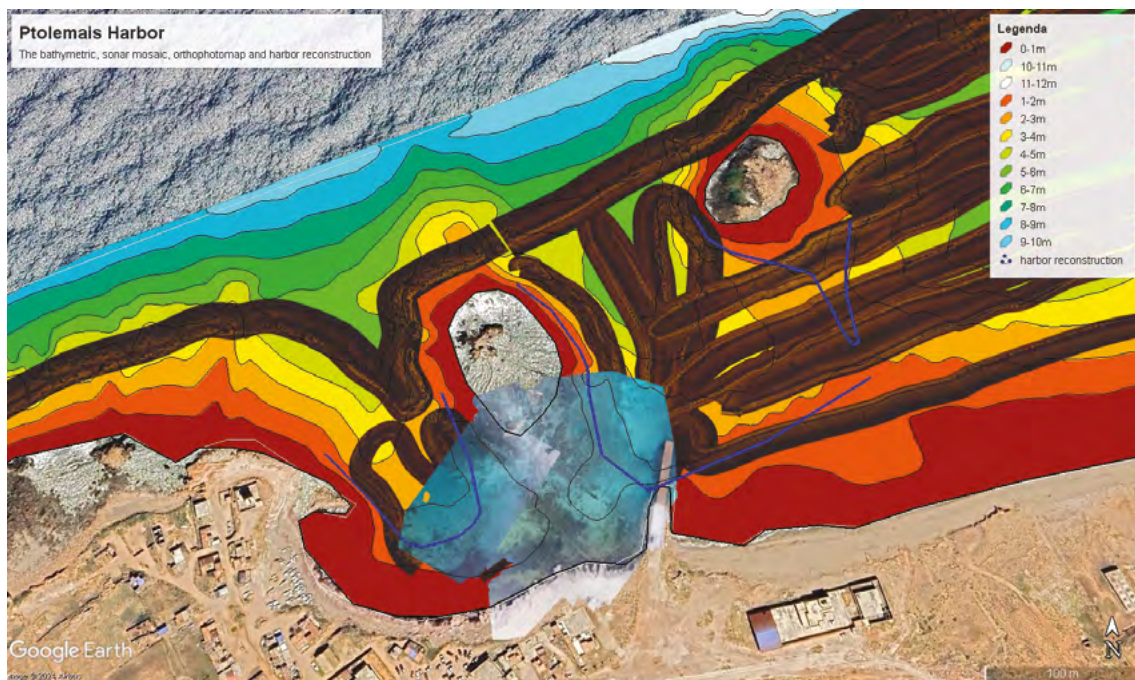


Fig. 5. Integrated plan with harbour reconstruction (elaborated by A. Brzóska).

Further sonar surveys are planned in the coming years. Particular consideration should be given to the harbour space and a small rocky island to the east located approximately 3 kilometres to the east of the harbour. According to local divers, ship anchors and a field of amphorae remains are to be found there. It is important to integrate information from all sources—aerial photographs, sonar images, and underwater photographs—into a single map of this part of the coast.

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Artur Brzóska
Faculty of Archaeology
University of Warsaw
abrzoska6@uw.edu.pl
orcid.org/0000-0002-3995-5395

Małgorzata Daszkiewicz

ARCHAEOMETRIC ANALYSES OF BRICK, CLAY, POTTERY AND COMPOSITE MATERIAL FROM A CISTERN, RISAN (MONTENEGRO)

Abstract: Laboratory analysis was performed on various samples from Risan. Local clay samples were analysed, as was a brick sample, pottery sherds (including amphora fragments) and samples of composite material from a cistern discovered during excavations carried out in Risan by a team from the Antiquity of Southeastern Europe Research Centre, University of Warsaw. The following analyses were conducted: MGR-analysis, firing tests, chemical analysis by WD-XRF, thin-section studies using polarising microscopy and scanning electron microscopy, and water permeability analysis.

Keywords: archaeometric analyses, pottery analyses, clay analyses, composite lining, Risan

This preliminary report sets out the results of laboratory analyses carried out on a clay sample (Risan-Saliny), a fragment of brick (from an item produced at a brick factory active during the nineteenth–twentieth centuries), five fragments of pottery vessels, fragments of eight amphorae and three samples of composite lining material taken from the wall of a cistern. All of the analysed pottery and mortar samples came from the excavations carried out in Risan by a team from the Antiquity of Southeastern Europe Research Centre, University of Warsaw.

The first analysis to be carried out was a plasticity test for the Risan-Saliny clay sample, which included gauging the water of plasticity (make-up water) content. Water of plasticity is the amount of water required to bring 100 grams of clay material to a plastic state (in practical terms this means that the material can be shaped into a ball which will not feature any cracks, and which can, depending on the type of clay, have a certain amount of pressure applied to it such that the ball will only become misshapen but no cracks will appear). The Risan-Saliny clay sample is characterised by water of plasticity of 27 g H₂O per 100 g of dry clay, and is a raw material suitable for making a plastic mass that can be readily formed. The next stage was to carry out a firing test. Briquettes for this test were made using a plastic mass (hand-made homogenisation of mass) and non-porous porcelain moulds which yielded dome-shaped samples; these samples were then dried and fired in a laboratory furnace at five temperatures (800, 900, 1100, 1150 and 1200°C).

Firing was carried out in a Carbolite electric laboratory resistance furnace, in static air, at a heating rate of 5°C/min, and a soaking time of 1 hour at the peak temperature; however, in contrast to MGR-analysis, the samples were not removed from the furnace but cooled with it down to room temperature (simulating the original firing of bricks). Two briquettes were fired at each temperature. One of the briquettes was left whole, whilst a thin slice was removed from

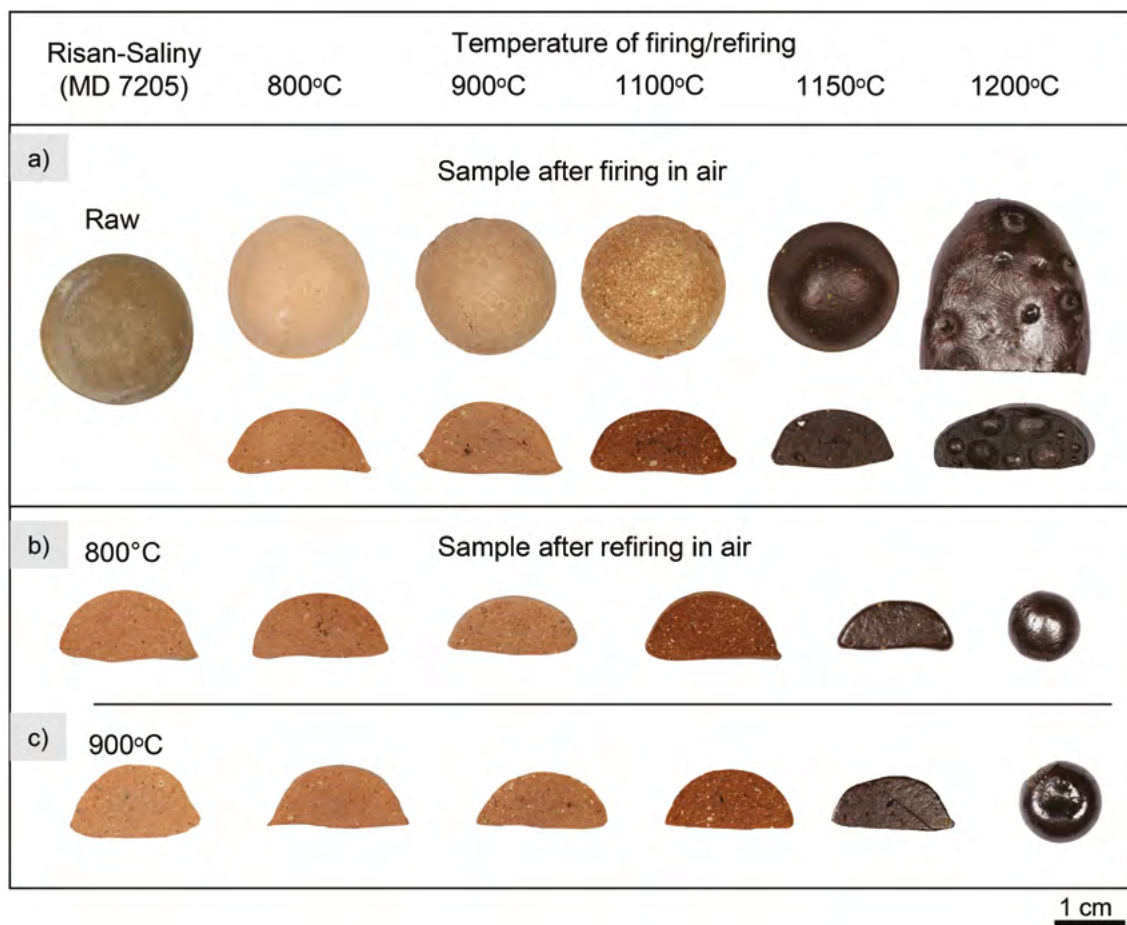


Fig. 1. Clay Risan-Saliny. a) briquettes prepared in laboratory from plastic mass and fired in standardised conditions in laboratory kiln; b) samples removed from briquettes fired at 800°C; c) samples removed from briquettes fired at 900°C; b and c = samples refired in exactly the same way that MGR-analysis is performed on samples of ancient pottery (photos M. Baranowski, drawing H. Baranowska).

the middle of the second briquette. The surface of the briquettes corresponds to the surface of the bricks, and the surface of the thin slice corresponds to the cut-section of a brick (Fig. 1a). Next, 12 more briquettes were made from the clay, and these were fired in the same conditions as described above at 800 and 900°C. Samples fired in this manner simulated brick samples fired at 800 or 900°C, and MGR-analysis was performed on these samples in exactly the same way that MGR-analysis¹ is performed on samples of ancient pottery. This means that thin slices were removed from each briquette and these were subsequently refired at 800, 900, 1100, 1150 and 1200°C (Fig. 1b and 1c). The samples removed from the brick were refired at the standard range of temperatures for abridged MGR-analysis, namely at 1100, 1150 and 1200°C (Fig. 2).

Comparing the thermal behaviour of briquettes made of Risan-Saliny clay, both after the firing test and after MGR-analysis, with the results obtained for the brick showed a slight inhomogeneity of both the raw material and the clay body from which the brick was made. The thermal behaviour is not identical, but it is similar (Fig. 3). The results of chemical analysis

¹ Firing was done in a Carbolite electric laboratory resistance furnace, in static air, at a heating rate of 5°C/min, a soaking time of 1 hour at the peak temperature, a cooling

rate of 5°C/min up to 500°C and then cooling with the kiln for 1 hour.

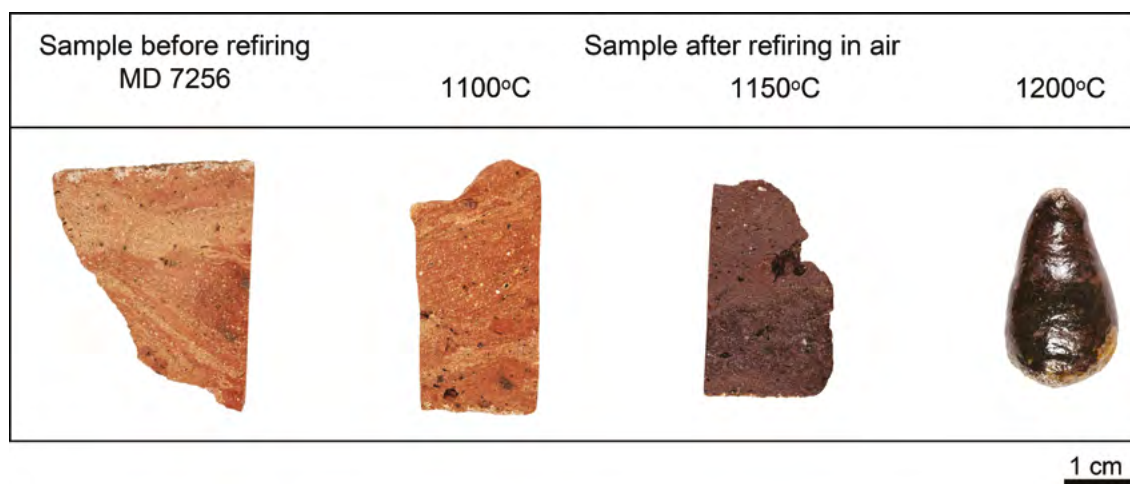


Fig. 2. Samples removed from brick refired at standard range of temperatures for abridged MGR-analysis: i.e. at 1100, 1150 and 1200°C (photos M. Baranowski, drawing H. Baranowska).

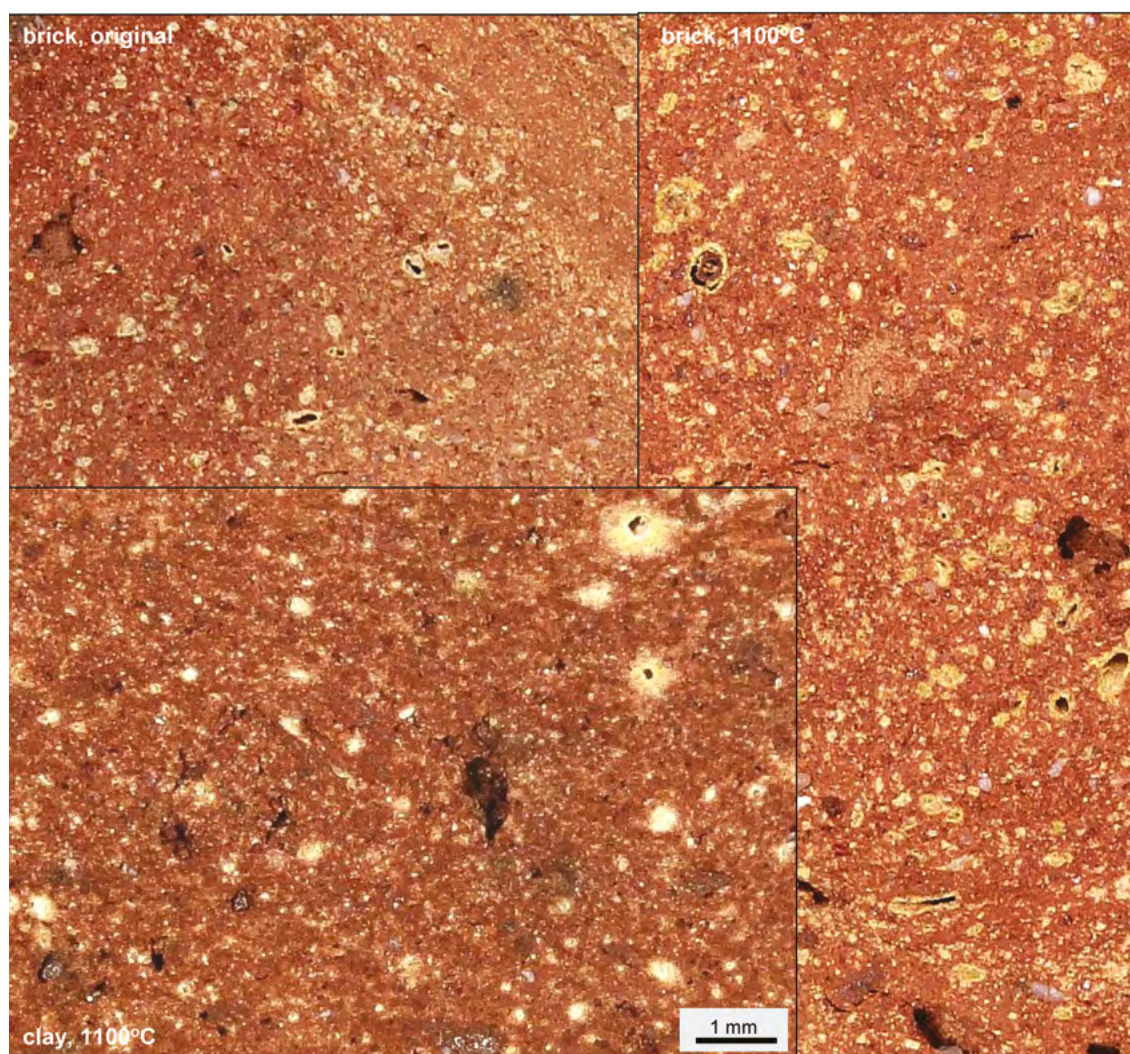


Fig. 3. Comparison of thermal behaviour of brick (original and refired sample) and briquette, refiring at 1100°C (photos M. Baranowski, drawing H. Baranowska).

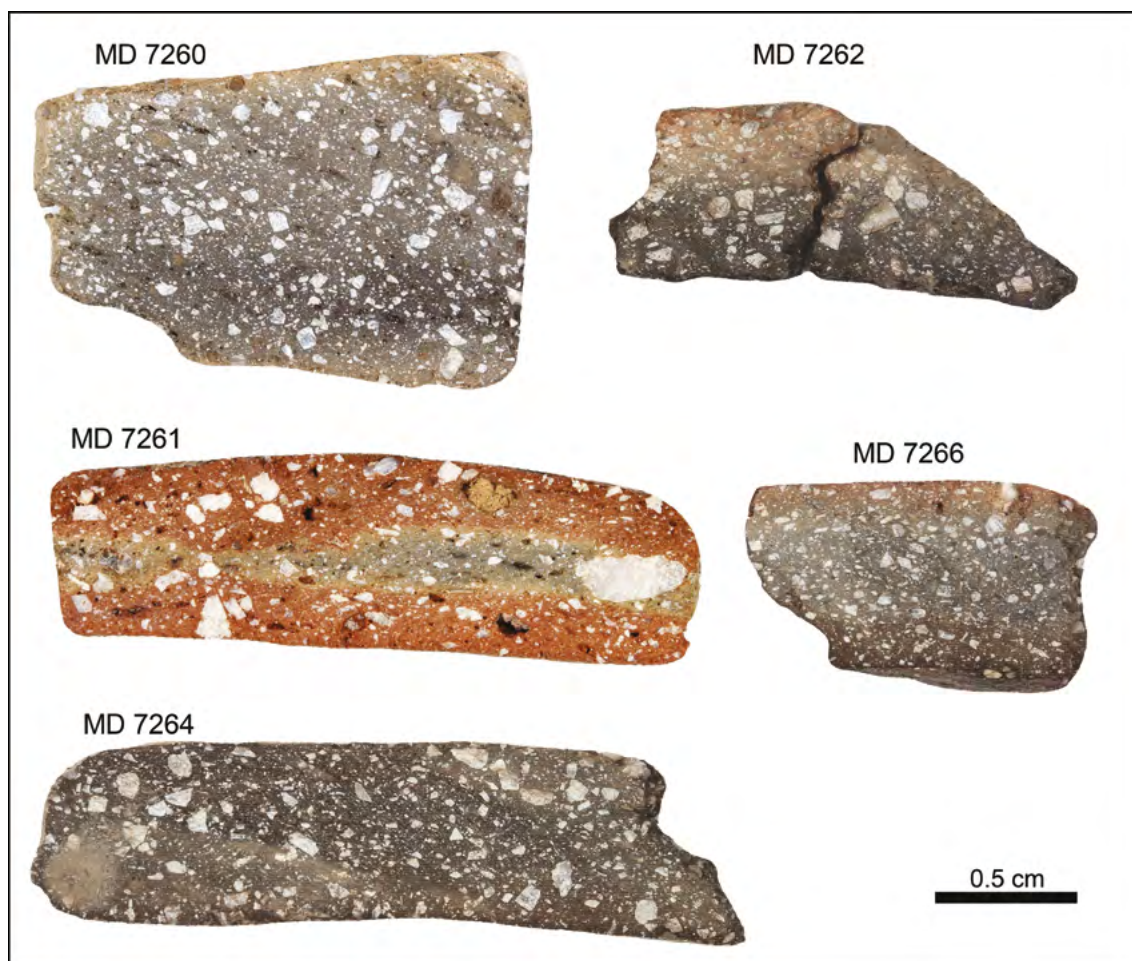


Fig. 4. Cross-section through wall of vessel. In each fragment temper of crushed carbonates is visible (photos M. Baranowski, drawing H. Baranowska).

by WD-XRF reveal the same: the chemical composition is not identical but similar; in the clay there is a higher concentration of Fe_2O_3 and Na_2O , whilst the brick features a higher concentration of SiO_2 (Tab. 1). Taking into account the similarities in phase composition (expressed in thermal behaviour) and chemical composition, we can conclude that the ceramic body used to make the brick was made from a plastic raw material taken from the same deposit (not the same spot) as the analysed clay sample.

The next to be analysed were the pottery samples. Analysis was only performed on seven of the nine ceramic vessel fragments (the other two were not analysed due to the small size of the samples and their temper content). Each fragment has intentional temper comprising crushed carbonates (five sherds are shown in Fig. 4). Chemical analysis by WD-XRF was performed on seven samples, abridged MGR-analysis on two samples, and three samples were refired at only one temperature—1200°C. None of the samples refired at 1100°C and 1150°C were glued on to the MGR-charts or photographed in their entirety, as these samples fell to pieces as soon as they had cooled to room temperature (see MD 7260, Fig. 5). Additionally, one week after refiring at 1200°C, samples MD7260 and MD7262 fell to pieces. This is attributable to the thermal decomposition of carbonates; all of the samples feature temper with a large quantity of carbonate grains. Chemical analysis revealed that CaO content ranges from 22 to 32 wt.% due to the

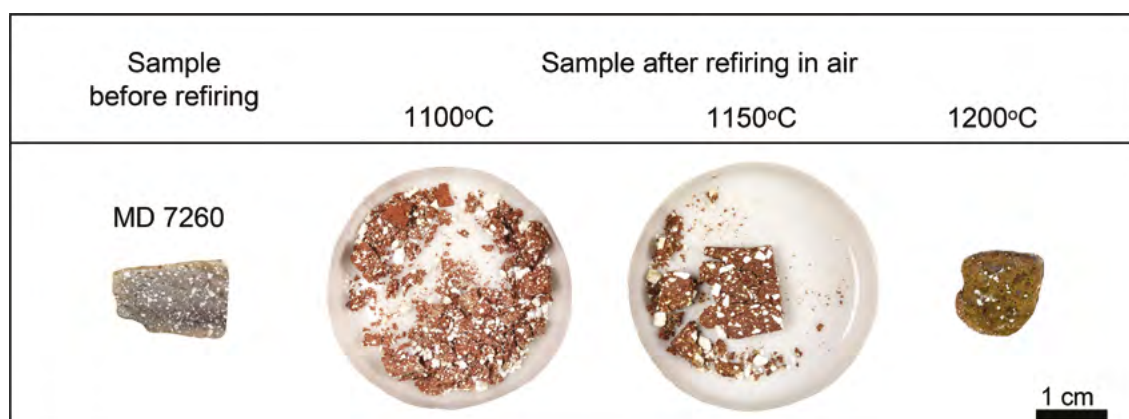


Fig. 5. Samples refired at 1100°C and 1150°C fell to pieces as soon as they had cooled to room temperature (photos M. Baranowski, drawing H. Baranowska).

concentration of strontium (Sr), which indicates that the carbonate grain inclusions were of various origin. Three groups of samples can be identified: the first group has an Sr content of 71–90 ppm (CaO 22–30 wt.%); the second has an Sr content of 117 ppm (CaO 29 wt.%); and the third group has an Sr content of 821 ppm (CaO 32 wt.%). Regardless of differences in Sr content, the samples also differ in their content of elements that are significant in provenance analysis. This means that the analysed fragments were made using various raw materials for the plastic part of the ceramic body. Six groups can be identified based on chemical composition (Tab. 1).

MGR-analysis revealed that the carbonates in sample MD7260² not only feature as particles of coarse temper but also as carbonates in the <10 µm fraction, finely distributed in a matrix of non-calcareous iron-rich clay. Sample MD7261³ was also made from a non-calcareous iron-rich clay, but with few carbonates in the matrix. In contrast, the matrix of MD7262 is slightly coloured by iron compounds after refiring, and carbonates are present not only in coarse fraction as non-plastic temper, but also distributed throughout the matrix. Sample MD7262 differs distinctly from the others because of the colour of its carbonates after refiring at 1200°C (Fig. 6). This sample has a high Sr content (Tab. 1).

In the case of two of the samples which were only refired at 1200°C (MD7264 and MD7266), it is difficult to determine what type the plastic part of the sample represents due to the large number of carbonates.

The results of MGR-analysis and chemical analysis indicate that the samples were made from different ceramic bodies; only two samples (MD7265 and MD7266) belong to one group. These samples could have been made from the same ceramic body in one batch (given that they are not two pieces of the same vessel). No analogy was found for any of the seven analysed samples of pottery among the previously analysed ceramic vessel sherds found at Risan. These samples also exhibit no similarities with basins, bricks (both ancient and modern), Risan-Saliny clay or clay recovered from excavation.

Samples taken from eight amphora sherds underwent both MGR-analysis and chemical composition analysis. Comparison with previously performed analyses⁴ revealed that one sample belongs to a group of amphorae tentatively identified as originating from production centre A (MD7332, Tab. 1), two samples belong to a group D-2 (MD7330 and MD7331, Tab. 1) while

² Base sherd, Risan, archaeological season 2006.

⁴ DASZKIEWICZ, DYCZEK, SCHNEIDER, BOBRYK 2005.

³ Sherd with handle, Risan, archaeological season 2006.

Tab. 1. Results of chemical analysis by WD-XRF, analysis of melted samples after loss on ignition (l.o.i.) at 900°C. Content of major elements calculated to oxides and normalised to 100%.

Lab. No.	SiO ₂	TiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	V	Cr	Ni	Cu	Zn	Rb	Sr	Y	Zr	Nb	Ba	La	Ce	Pb	l.o.i. %
per cent by weight																									
Risan Saline - clay																									
MD 7205	61.45	0.81	14.43	7.07	0.15	4.79	6.34	2.31	2.51	0.14	138	405	234	62	91	122	140	38	176	13	324	25	59	19	10.19
brick																									
MD 7256	64.17	0.80	13.93	6.73	0.14	3.92	6.36	1.55	2.27	0.13	100	437	226	70	108	111	148	32	187	13	300	18	74	34	0.49
vessels																									
MD 7260	43.20	0.61	16.93	6.13	0.03	1.65	28.60	0.68	1.89	0.27	116	162	87	58	79	102	110	34	208	20	340	34	70	44	19.32
MD 7262	45.41	0.47	15.53	4.03	0.18	0.96	31.54	0.67	1.06	0.16	97	141	69	56	98	63	814	33	174	16	1575	42	59	26	21.66
MD 7265	46.89	0.53	13.81	6.41	0.01	1.07	29.26	0.71	1.12	0.18	114	325	62	31	46	84	71	18	162	12	165	9	30	30	19.35
MD 7266	46.56	0.53	13.62	6.26	0.01	1.01	30.15	0.61	1.05	0.20	106	330	66	36	47	79	76	14	158	13	194	7	49	29	20.23
MD 7264	46.83	0.50	13.07	6.04	0.02	1.27	29.85	0.75	1.27	0.41	102	336	119	45	68	82	77	26	141	10	278	19	66	26	22.26
MD 7261	52.01	0.51	12.89	6.59	0.01	1.21	24.87	0.72	1.02	0.17	109	490	110	52	43	75	69	21	148	8	241	12	32	28	17.52
MD 7263	50.28	0.57	14.50	7.33	0.11	2.64	22.09	0.82	1.45	0.21	134	419	317	59	85	103	82	25	129	9	282	22	64	29	16.81
amphora group A (Daszkiewicz et alii 2007)																									
MD7332	59.78	0.808	17.41	6.76	0.106	3.01	6.87	1.43	2.96	0.87	107	137	77	57	117	142	187	38	211	15	551	34	76	35	6.73
amphora group D-2 (Daszkiewicz et alii 2007)																									
MD7330	53.19	0.737	17.11	6.64	0.112	3.11	13.76	0.73	2.16	2.45	79	126	78	70	123	81	242	42	211	16	455	49	76	54	10.19
MD7331	53.54	0.787	18.23	7.32	0.172	3.08	11.21	0.81	2.41	2.44	79	134	77	56	119	99	221	42	206	18	480	30	84	54	9.04
various groups of unknown provenance																									
MD7328	54.24	0.749	17.75	7.08	0.144	3.74	11.94	0.71	2.19	1.45	107	172	98	45	110	81	373	33	167	15	438	37	84	43	5.46
MD7329	51.20	0.702	16.98	6.40	0.120	3.62	15.78	0.72	2.18	2.30	103	148	70	58	117	77	363	40	197	13	527	42	75	49	9.61
MD7333	51.02	0.646	16.21	6.05	0.168	2.66	17.22	0.71	1.98	3.32	67	106	60	59	98	66	393	35	201	13	607	47	76	47	11.48
MD7335	54.42	0.680	16.35	6.59	0.140	3.95	13.76	0.90	2.04	1.18	106	159	92	58	109	66	425	32	156	15	399	7	63	44	3.34
MD7334	49.00	0.599	15.65	5.77	0.143	3.07	20.65	0.65	1.42	3.05	100	139	59	52	87	58	412	37	202	14	479	24	59	31	14.13

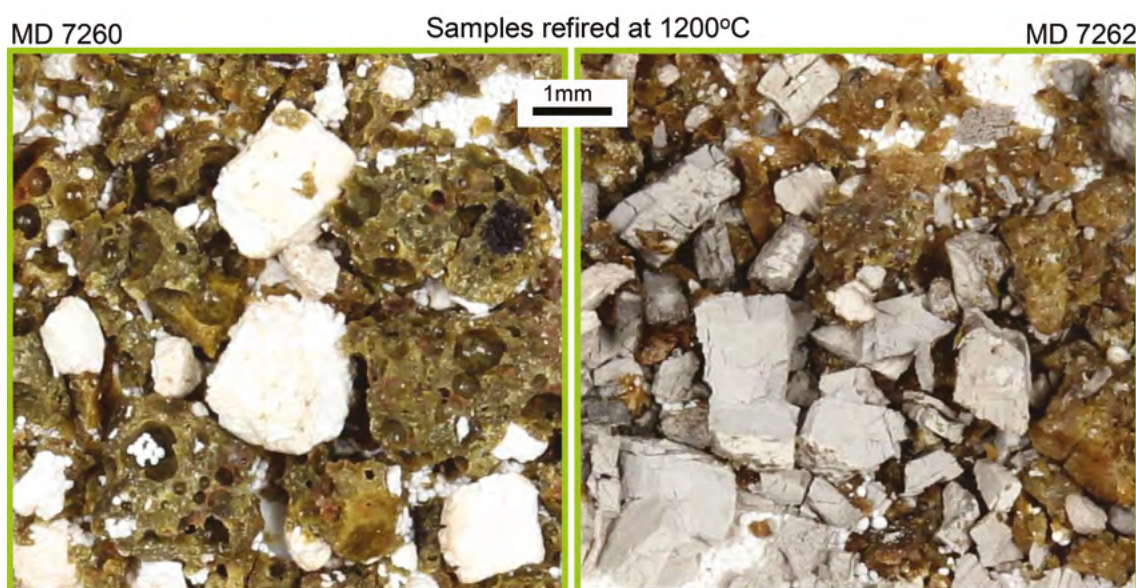


Fig. 6. Samples after refiring at 1200°C with distinctly different colour of carbonates (photos M. Baranowski, drawing H. Baranowska).

four samples belong to various production groups of Greco-Italic amphorae (Tab. 1). One sample differs markedly from the others (MD7334, Tab. 1), and no analogies could be found for it in either the Schneider/Daszkievicz database or any published findings. The correlation between the chemical composition of the amphora sherds and the results of residue analysis⁵ suggest that this amphora was used to transport garum (as well as six amphorae with high phosphorus content, $P_2O_5 > 1$ wt.%).

The last stage of laboratory studies involved the analysis of three fragments of lining material taken from the wall of a cistern. In two samples, only one thick layer was visible, covered by a very thin white layer (MD7258 and MD7259), while the third fragment (MD7257) featured three readily visible layers (two thick layers covered by a thin white layer, Fig. 7).

Macroscopic analysis revealed that the thick layers in the two-layer samples (MD7258 and MD7259) are composites made by mixing a binding substance with grog.⁶ The grog consists mostly of grains measuring up to 5 mm (grains of up to 3 mm predominate), with lime aggregates (mostly up to 3 mm with a few up to 8 mm) and rare inclusions of rounded, gravel-sized quartz (with at least one grain of 8 mm in diameter). The term “lime aggregates” is used even if in reality they consist of lime-derived carbonate aggregates, to be distinguished from original (i.e. geological) carbonates.

In the second and third layer of the three-layer sample (MD7257), grog and lime aggregates are visible, both in the ≤ 3 mm fraction (rare grains of grog up to 5 mm).

A thin white layer visible on the top of all three fragments taken from the cistern is probably plaster (used for coating the walls to make the surface smooth, waterproof or to prepare it for painting).

Theoretically, thick layers in two-layer fragments and a third layer in three-layer fragments with coarse particles of filler should not be called “mortar” or “concrete”. Concrete is a composite made by a binder and a filler in the form of coarse particles (> 5 mm fraction), mortar is a composite

⁵ Results of analysis of Ivancea amphorae, project of Prof. M. Meyer FU Berlin, publication in preparation.

⁶ Grog = crushed ceramic material: ceramic vessels as well as crushed bricks, tiles.



Fig. 7. Samples of lining material taken from a cistern wall (photos M. Baranowski, drawing H. Baranowska).

made by a binder and a filler in the form of small particles (all grains in the $< 5\text{mm}$ fraction).⁷ The two-layer samples (MD7258 and MD7259) are composites ranging between mortar and concrete—due to negligence or limited technological know-how?

The second and the third layer in the three-layer fragment (MD7257) should be called “mortar” as both layers have particles of filler in the $< 5\text{mm}$ fraction.⁸

In spite of differences in the filler, in all cases all layers represent composites with a lime-based binder containing a filler in the form of grog derived from very different ceramic materials and lime aggregates. The texture of these layers is not dense; a lot of small round pores are macroscopically visible. For the thick layers of the two-layer samples, values of apparent density and open porosity were estimated by hydrostatic weighing. In both cases they represent a light mortar with apparent densities of 1.40 g/cm^3 (MD7258) and 1.27 g/cm^3 (MD7259). Open porosity values amount to: 43.7 vol.% (sample MD7258) and 52.76 vol.% (sample MD7259). These estimated values are comparable with the values of the thick layers in samples from Roman cisterns discovered at Uthina, Northern Tunisia.⁹

The analysed composite material was used as a coating to line the cistern, therefore it had to be waterproof. In cisterns and other water installations, filler in the form of grog can be used instead of volcanic ash to produce a waterproof hydraulic mortar (or mixture of grog and volcanic ash). Unfortunately, the samples submitted for analysis were small, and it was not possible to carry out a standard test to determine the degree of water resistance, and nor was a calculation of permeability using the Carman–Kozeny equation performed. However, a water permeability test was conducted on two samples in accordance with the method devised for the

⁷ HOBBS, SIDDALL 2011.

⁸ $< 1\text{ mm}$ according some scholars.

⁹ FARCI, FLORIS, MELONI 2005.

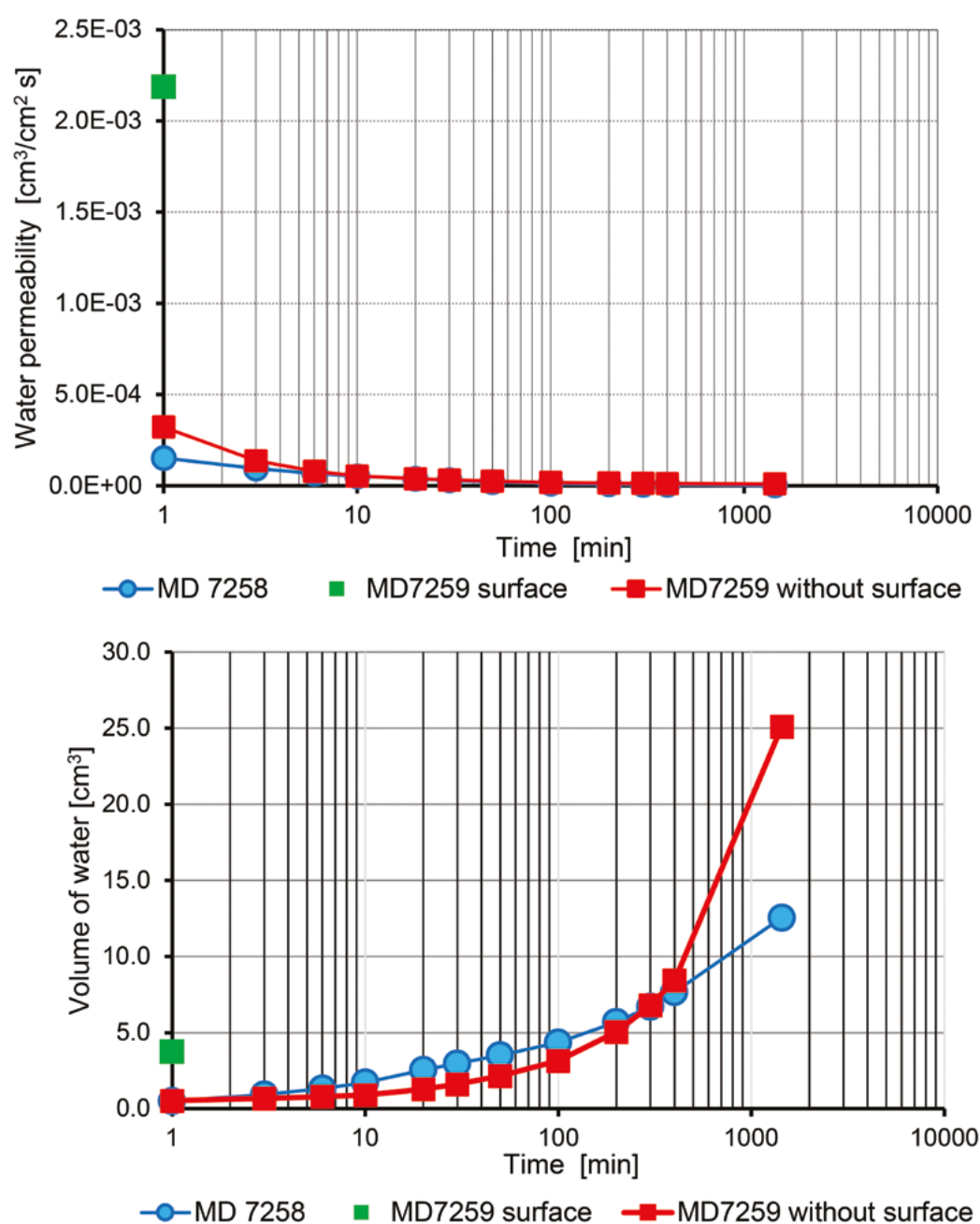


Fig. 8. Permeability test: readings taken for sample MD7258 and sample MD7259.

a) water permeability; b) water volume; sample MD7259: green – water passing through outer part of composite layer (water penetrates into sample through thin white layer); red – water passing through composite without thin white layer (M. Daszkiewicz).

analysis of ancient pottery. Figure 8 shows the readings taken for these samples, water passing through the outer part of the composite layers. Figure 8a shows the water permeability values and Fig. 8b shows the water volume passing through the composite material.

Two measurements were taken before and after removing the very thin white outer layer on sample MD7259. This layer absorbed water so quickly that the measurement had to be stopped before 3 minutes had elapsed (Fig. 8a and 8b; solitary green square). This phenomenon

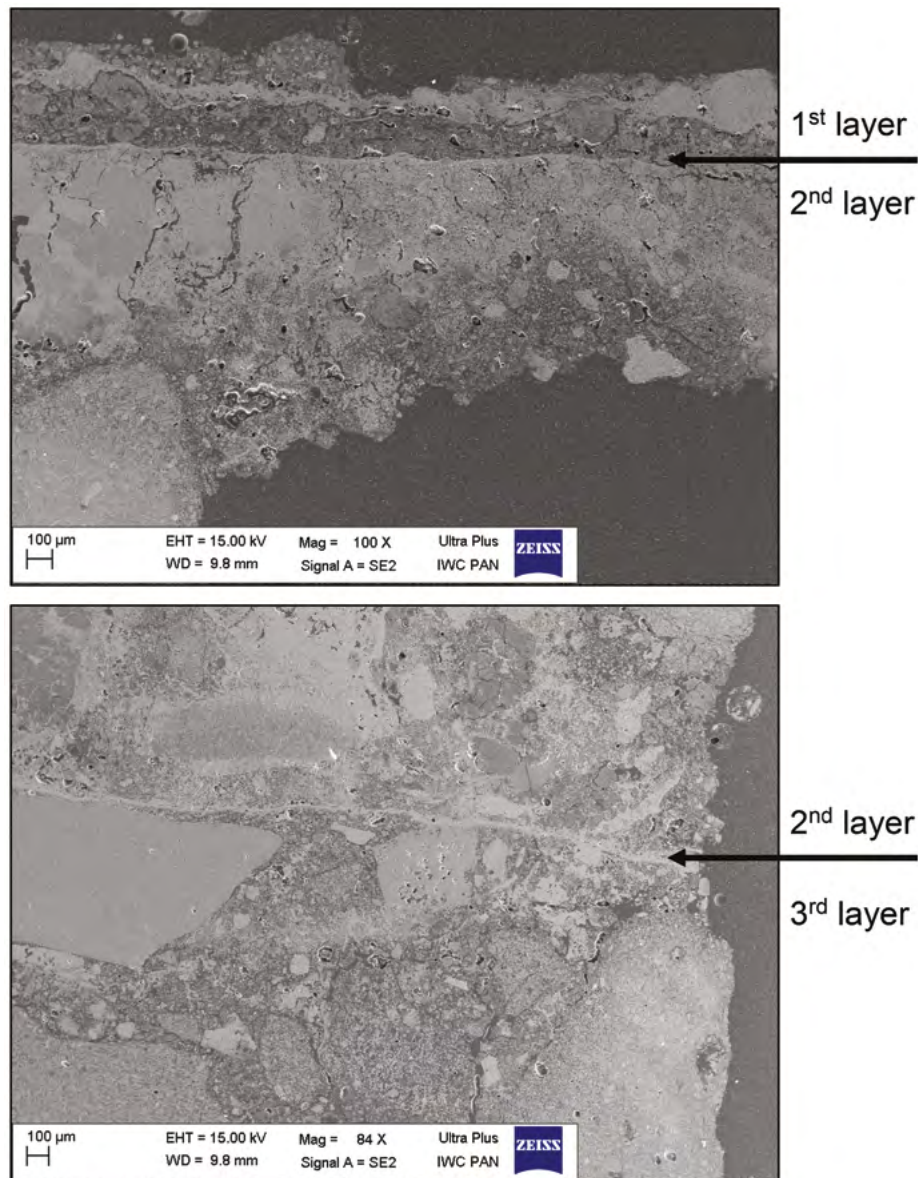


Fig. 9. SEM images of interface between layers (M. Daszkiewicz).

was not observed in sample MD7258. After removing the white layer, water passes through MD7259 at a significantly slower rate than with the layer, and also at a slower rate than noted in sample MD7258. Droplets appear on the outer surface of sample MD7258 after 3 minutes, and after 20 minutes on sample MD7259 while absorbing more than twice the volume of water (Fig. 8b). These results are surprising and were not taken into account in the case of samples taken from the cistern.

The three-layer piece of composite was selected for SEM/EDS analysis and thin-section studies using a polarising microscope. Fig. 9 shows SEM images of the borders between layers. In the first thin layer the binder is whitish in colour. Small fragments of bone were found in this layer (Fig. 10). The second layer (pale beige), in contrast to the third (dark beige) layer, contains more binder than filler and the grog particles are smaller. In the second layer, white lime inclusions dominate over reddish-brown grog inclusions in the filler.

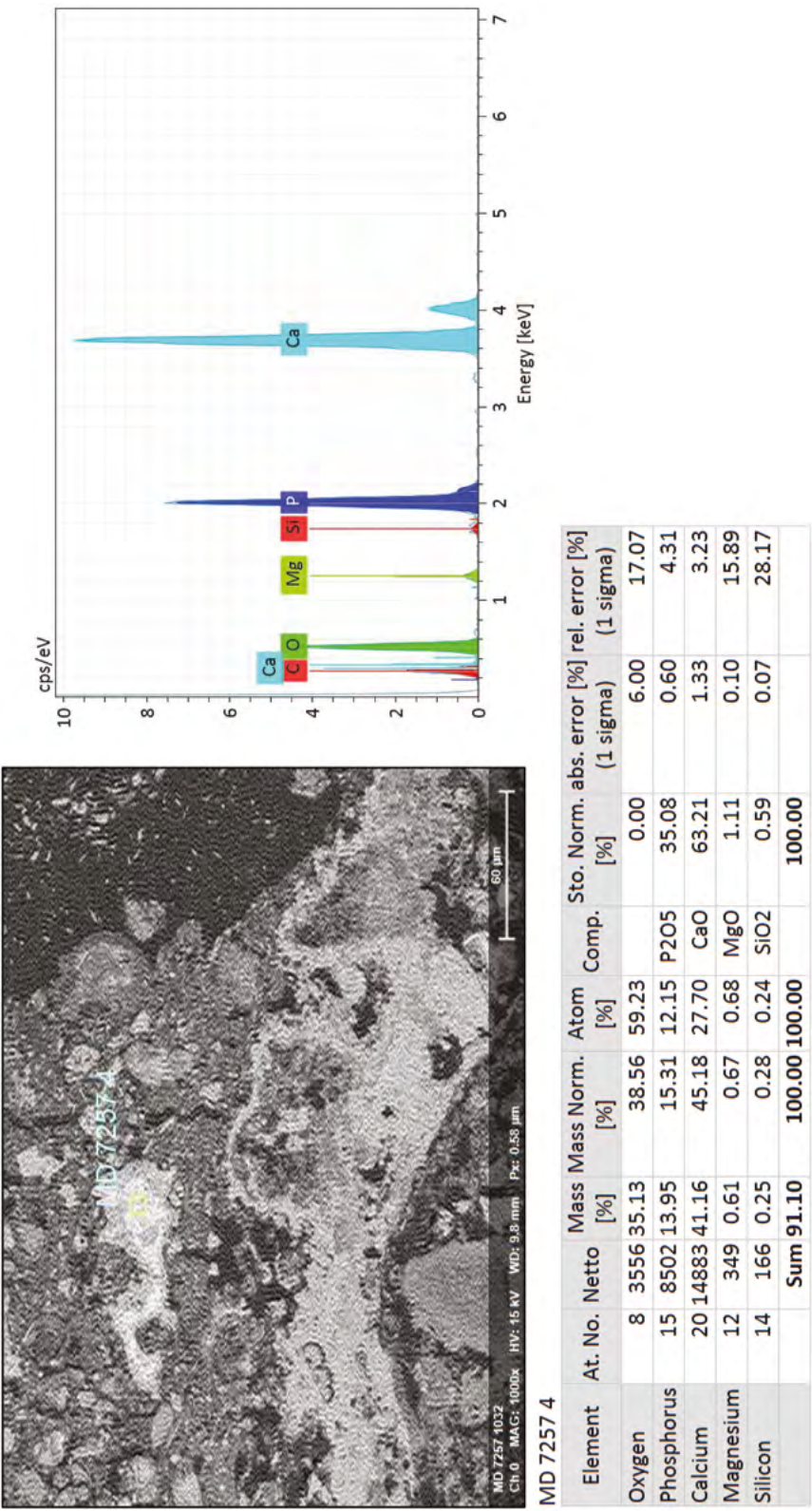


Fig. 10. SEM image and EDS results. Small fragments of bone visible (M. Daszkiewicz).

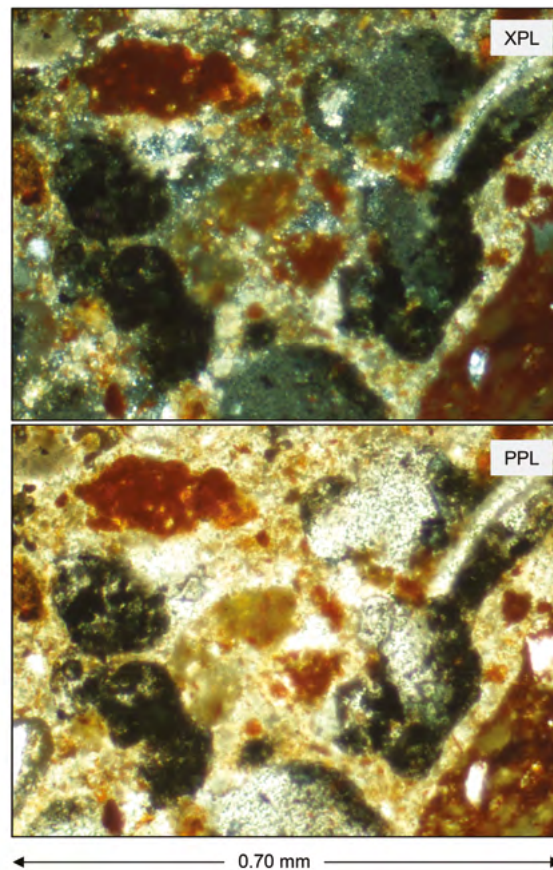


Fig. 11. Thin section: XPL micrograph (top) and PPL micrograph (bottom). Fine to very coarse reddish-brown grog and white lime inclusions as well as fine carbonized particles visible (M. Daszkiewicz and G. Schneider).

Fine to very coarse reddish-brown grog and white lime inclusions (grains of grog are more common) as well as fine carbonized particles (Fig. 11; remains of the fuel used for burning the lime?) were observed in the third layer.

The results of SEM/EDS analysis of lime-saturated binders in the second and third layers reveal a high concentration of Ca (95–80 wt.% and 83–67 wt.% of CaO respectively) with Si, Al and Mg making up the rest of the chemical composition. In the second layer some grains of quartz (0.08 mm) with reaction rims are observed in the binder. The high concentration of Mg points to the use of Mg-rich calcium carbonates (but not dolomite) for preparing slaked lime. The reactive pozzolanic material¹⁰ in the case of the analysed samples from the cistern in Risan was ceramic (grog).

It is evident from both thin-section studies and SEM/EDS analysis that at least three types of grog were used. Under the polarizing microscope, apart from grog fragments, a filler in the form of carbonate rocks was also observed. Fig. 12 shows grog particles: with biogenic carbonates

¹⁰ ARTIOLI, SECCO, ADDIS 2019, p. 170: “The reactive pozzolanic material may be natural or synthetic silica glass, volcanic ash, radiolarite or diatomaceous earth,

phytoliths, ceramics, clay, metallurgical slags, or any other reactive aluminosilicate compound”.

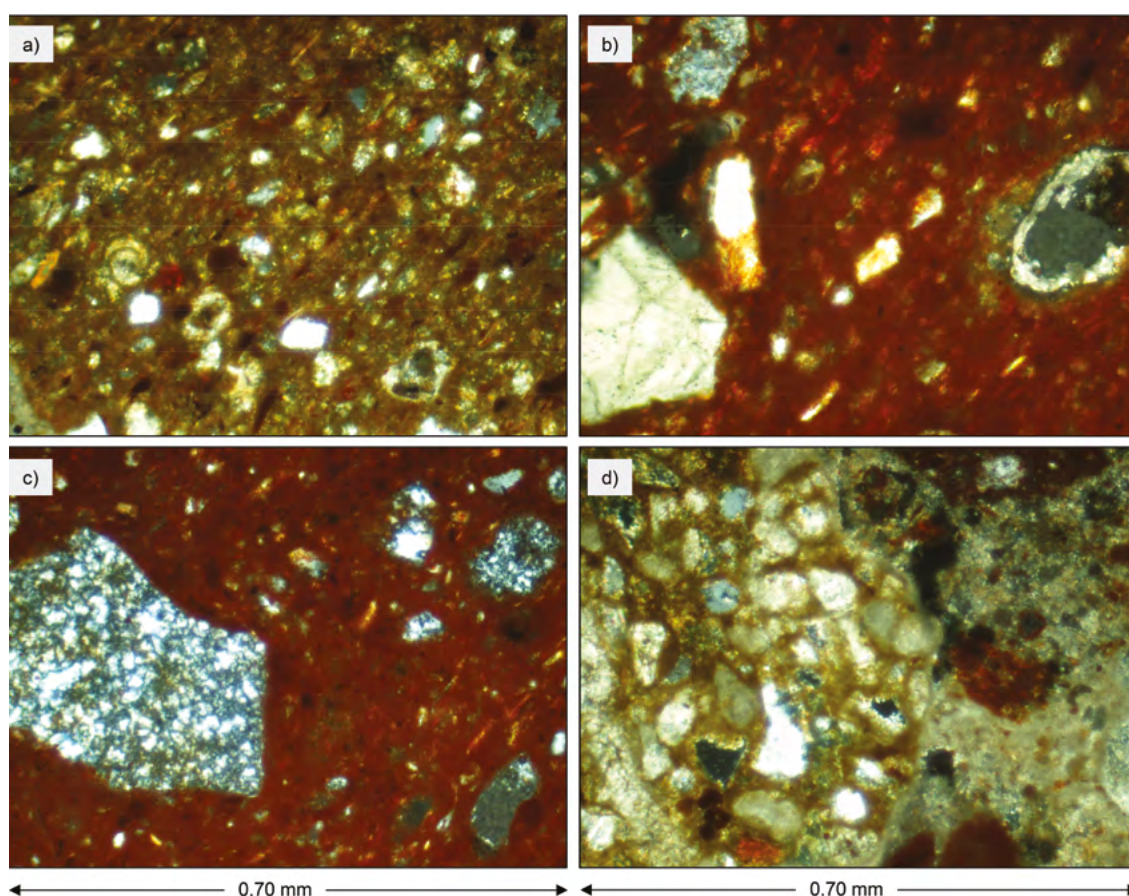


Fig. 12. Thin sections, XPL. Grog particles: a) with biogenic carbonates; b) with a large quartz crystal and hole left by a carbonate; c) with inclusions of flint; d) inclusion of rock fragments consisting of carbonate sand (Daszkiewicz and G. Schneider).

(Fig. 12a); with a large quartz crystal and hole left by a carbonate (Fig. 12b); and with inclusions of flint (Fig. 12c) and added as a filler, not for lime burning, a singular inclusion of rock consisting of carbonate sand (Fig. 12d). The SEM image of the three different grog particles and the element mapping for this area (elements used: Si, Ti, Al, Fe, Mn, Mg, Ca, Na, K, P, Cr, Ni, V, Zr) are shown in Fig. 13. The mapping of individual elements is shown in Fig. 14. EDS analysis, which established the chemical composition of the mortar samples, revealed that one type of grog came from a region where clay with a high magnesium content occurs. This composition is similar to that of black-coated ceramic vessels found at Risan and identified as pottery from workshops in present-day Albania. It is possible that sherds of this pottery may have been used as grog; however, it seems more likely that other products were used which have not previously been analysed, for example common wares or ceramic building materials made at a workshop within the same production area.

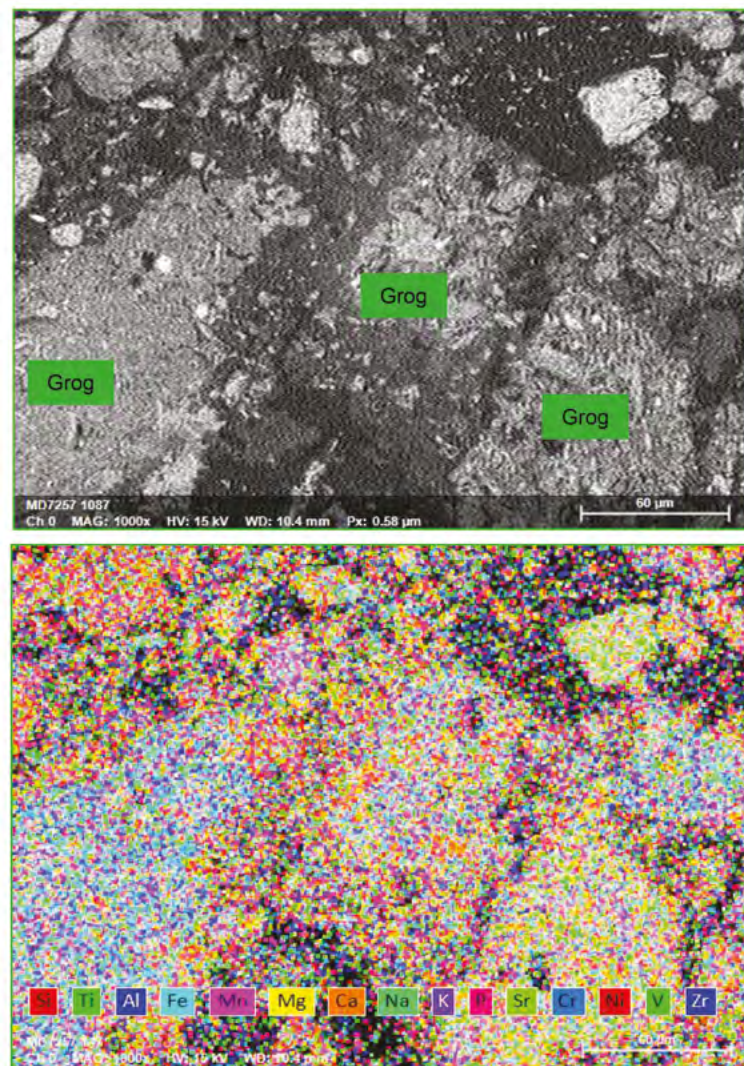


Fig. 13. SEM image of three grog particles and element mapping for this area; elements used: Si, Ti, Al, Fe, Mn, Mg, Ca, Na, K, P, Cr, Ni, V, Zr (M. Daszkiewicz).

Conclusions

Both the second and third layers of sample MD7257 are composites with a lime-based binder containing a filler in the form of grog derived from very different ceramic materials and in the form of some carbonate rocks as well as lime aggregates. Both layers can be called mortar. As for the three-layer sample, a water permeability test could not be done and it remains unclear whether the second layer was applied during the repair/remodelling of the cistern or whether it was a feature of the cistern's original structural design and had an impact on its water resistance. The differences in mortar technology (MD7257 vs. MD7258 and MD7259) could express the different know-how of engineers.

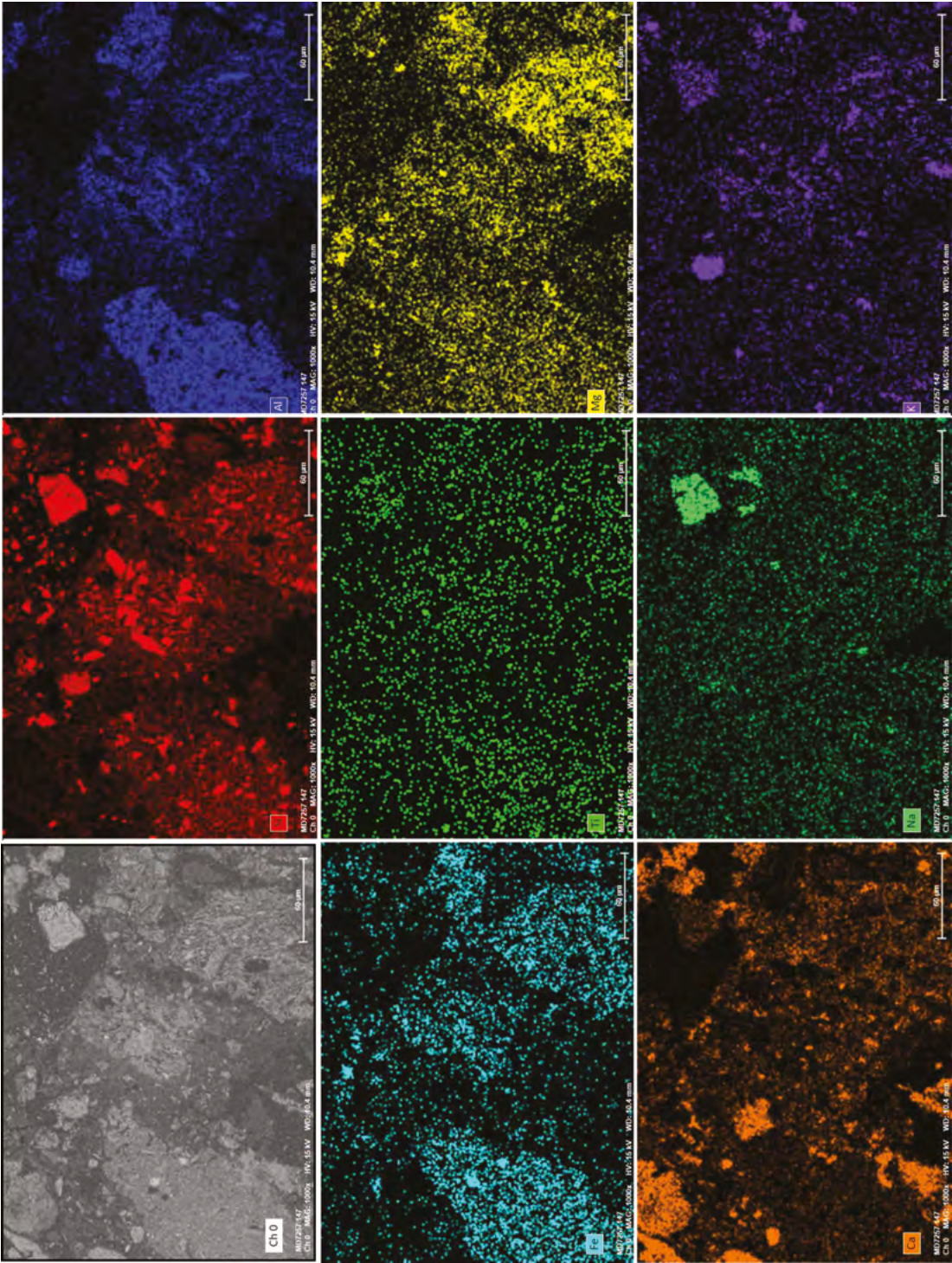


Fig. 14. Mapping of individual elements (M. Daszkiewicz).

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Małgorzata Daszkiewicz
Freie Universität Berlin
Institut für Prähistorische Archäologie
and
ARCHEA Warszawa
m.dasz@wp.pl
orcid.org/0000-0002-8735-0649

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