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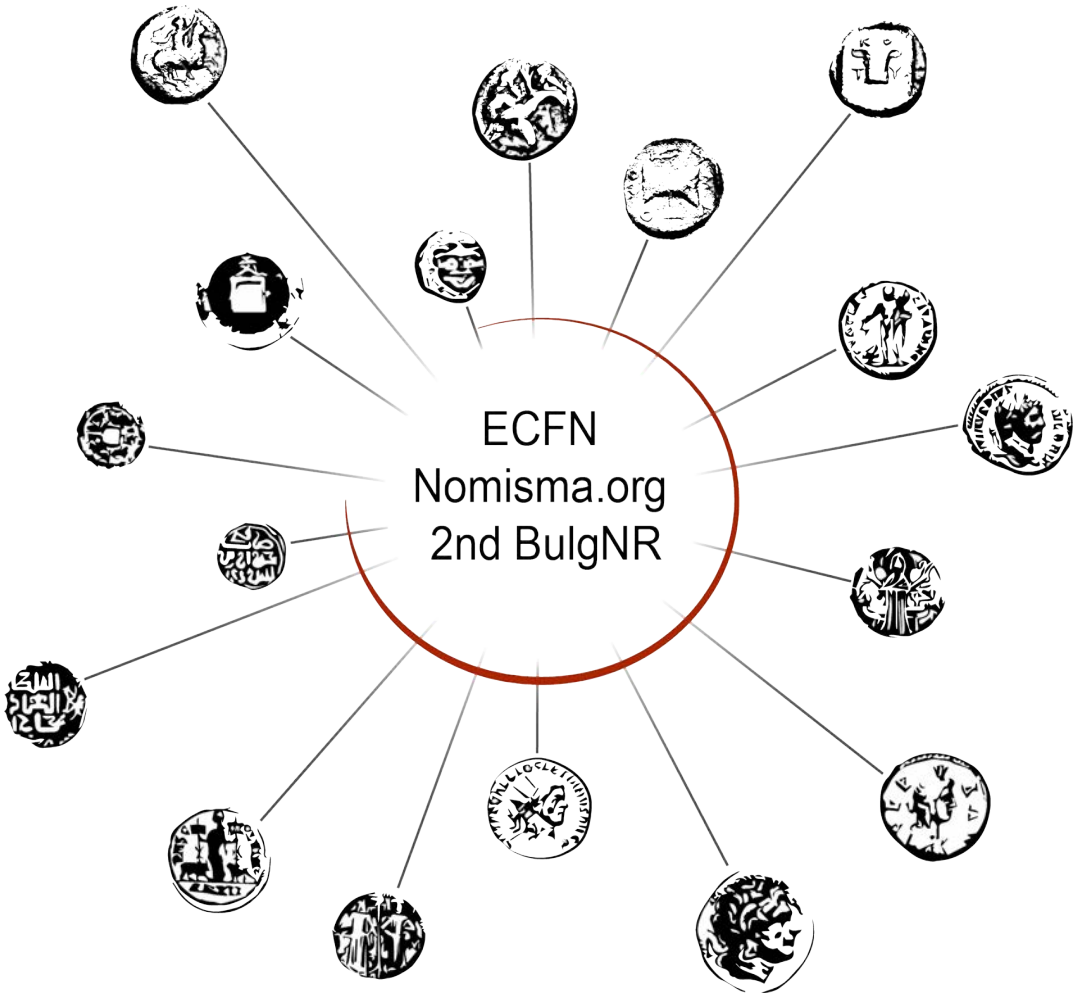
# PROCEEDINGS OF THE 10TH JOINT MEETING OF ECFN AND NOMISMA.ORG & 2ND BULGNR TOGETHER




ProVias

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of the 10th Joint Meeting of ECFN and Nomisma.org
& 2nd BulgNR TOGETHER
International Conference Sofia, 19 – 23 June 2023

Editors:
Dilyana Boteva-Boyanova,
Julia Tzvetkova,
Lily Grozdanova,
Valentina Grigorova-Gencheva,
Ilya Prokopov

Scientific editors:
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Vladimir Stolba

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**Sofia 2025**

**ProVias**

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The present volume includes 27 papers, delivered (as presentations or as posters) at the 10th Joint ECFN and Nomisma.org Meeting & 2nd Bulgarian Numismatic Readings TOGETHER Conference, held at the Sofia University "St. Kliment Ohridski" on June 19th – 23rd, 2023.[1]

This scholarly meeting gave platform to eight ECFN sessions with a total of 40 presentations; three BulgNR sessions with a total of 15 presentations; a panel "The Roman provincial coins of Bithynian mints found in Europe" (organised by Mirjana Vojvoda in a cooperation with Hale Güney and Dario Calomino) with a total of three presentations and five posters; a poster session with 24 posters, each one of them presented also within an intensive science slam; a Nomisma presentation by Andrew Meadows; and three workshops (1. Corpus Nummorum Team, with a total of six presentations, chaired by Ulrike Peter; 2. ACCSN team with a focus on the forgery techniques, chaired by Ilya Prokopov and Dilyana Boteva-Boyanova; 3. Development of a Nomisma data model for a Greek hoard database, chaired by Ute Wartenberg and Andrew Meadows). The program of the event also included visits to ancient Serdica sites and museums in Sofia (National Archaeological Museum and Regional History Museum – Sofia), as well as an excursion to Heraclea Sintica, Petrich Museum of History and Regional History Museum Blagoevgrad; in the latter a numismatic exhibition was organised, including some of the very important coin hoards from the region.

The papers included in this volume have passed blind peer reviews, language proofreading by a native speaker, and scientific editing. In cases of disagreement on debatable subjects between the authors and the blind reviewers or the editorial team, the decision was made to publish the respective texts, in accordance with the original content, and on such occasions the responsibility would lie entirely with the authors.

Sofia, 22.12.2025 The Editors

[1] See the program and the book of abstracts: https://www.bg-numismatic-readings.com/archive/10th-joint-meeting-of-ecfn-and-nomisma-org-2nd-bulgnr-together/program-2/

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Sofia University, 19th June 2023

Dear colleagues,

Dearest friends – old ones and hopefully new ones,

Welcome to Sofia and our Alma mater – Sofia University "St. Kliment Ohridski"!

Welcome to Bulgaria, the land of the greatest accumulations of gold and silver coin hoards in the Graeco-Roman times, as convincingly calculated by Prof. François de Callataÿ in 2022.

We are all here now because three and a half years ago, five of us in this hall had a dream – not as universal as Martin Luther King's one precisely 60 years ago (in the summer of 1963), but still no less bold one.

At a pre-Silvester meeting at the very end of 2019, following the cheerful invitation of Dr. Valentina Grigorova-Gencheva to a cocktail afternoon, within a general talk about the passing year, we inevitably came to discuss an issue burdening all five of us. As Bulgarian University lecturers, it is a painful topic that we clearly haven't done enough to earn the trust of the world's numismatic community as reliable partners, hardworking colleagues, and sound experts – a duty we also owe to our students who are following in our footsteps. With two of us almost at the end of our academic careers, right there to catch the moment without delay, we outlined an action plan to make Bulgarian numismatics more visible and open to the world and to ensure continuity in the Bulgarian scholarly community within the field of Numismatics. The latter is essential for us, as we have witnessed a generation break with a substantial negative impact. During the following weeks, this action plan was turned into real steps within five different directions.

To our delight, everything was going smoothly until early in March 2020, when the whole world was struck by the COVID lockdown. Personally, I was so shocked and discouraged, almost paralysed both in my academic responsibilities and concerning our action plan. Thank God, I am blessed by having next to me two highly skilled and brilliant young colleagues – brilliant in every sense of this word – Assoc. Prof. Dr. Julia Tzevtkova and Assis. Prof. Dr. Lily Grozdanova, who did not even for a second intend to stay and wait to see what would happen.

Within a couple of days, they transformed the planned onsite seminar and conference into digital ones, giving to those of us, wittily named by Prof. Ilya Prokopov "the BBC-s", i.e., "**b**orn **b**efore **c**omputer", the hope that what was started as a dream at the very end of 2019 could be carried out, no matter what, into a successful and fruitful realization.

Now, just three and a half years later, here is what we have achieved:

1) Creating a project for an *international numismatic seminar* with leading experts (receiving immediate approval for funding by the *"Heritage BG" Centre of Excellence*, to which here I express our huge gratitude). It was transformed into a webinar and took place online in May–June 2020 (https://www.nasledstvo.bg/numismatic-webinar/).

2) Elaborating a complex scientific project aiming to implement the digital technologies and methods of empirical sciences in the studies of ancient Thrace, including, of course, the coinage issued on its territory during different historical periods. The project *Measuring Ancient Thrace* (no. КП-06-Н50/3 from 30.11.2020, financed by BNSF) shortly labelled as *DiGiThrace* with Assoc. Prof. Julia Tzvetkova as a Coordinator, was ranked second in the 2020 call of the *Bulgarian National Research Fund* and received the needed financial support starting in November 2020 (https://digithrace.uni-sofia.bg/about/). Within this project, we are collaborating with *Corpus nummorum* (Berlin-Brandenburg Academy of Sciences and Humanities), as will be presented during the conference.

3) Establishing a regular numismatic forum named *Bulgarian Numismatic Readings* for Bulgarian and international specialists in the field of numismatics, history, archaeology, art history, anthropology, etc. (https://www.bg-numismatic-readings.com/). It is viewed as a platform for presenting researchers' observations on coin minting and circulation, economy, trade, finances, etc., as a contribution to the picture of the past of Southeastern Europe from Antiquity to the Ottoman period (6th century BC – 19th century). The First issue of these readings on the topic *History and Society in Numismatic Perspectives* took place in November 2020 in the Webex virtual

room of Sofia University "St. Kliment Ohridski". The Second issue (*"Traditional Numismatic and Digital perspectives"*) is organized together with the "10th Joint Meeting of ECFN and Nomisma.org" and is the topic of our present conference.

4) Starting the procedures needed for a digital numismatic journal. Since March 2023, the 1st issue has been available under the open science concept, with free online access. *The Bulgarian Numismatic Journal* is an open-access peer-reviewed edition. It is the first e-journal for numismatics in Bulgaria and the neighbouring region, offering exclusive online content to its authors and readers (https://bulgnj.com/index.php/e-journal). The journal aims to advance the numismatic research focused on the Balkan Peninsula and the Southeastern Europe region, where the Bulgarian lands form the natural geographic core. Its mission is to promote numismatic research on coinages from Antiquity and the Middle Ages up to the modern era, providing a free, accessible online platform following high-quality scientific and publication standards. Precisely in the supplementary series of this e-journal, we intend to publish the contributions of this forum.

5) Initiating a regular *Sofia Numismatic School* at the Sofia University "St. Kliment Ohridski" (https://digithrace.uni-sofia.bg/sofia-numismatic-school/about-the-sofia-numismatic-school/). The first issue is coming in September 2023, i.e., in three months, with the selection of the participants already finalised. The school will be focused on the ancient numismatics of Thrace and the Black Sea Region.

And last but not least, using the expertise of both Ilya Prokopov and Valentina Grigorova and in an effort to develop further what they had achieved so far, in July 2021 we started the *Ancient Coins Counterfeits Scientific Network*, sponsored by the Alexander von Humboldt Foundation (https://accs-network.com/). The first international experimental numismatic workshop of this network took place in the spring of 2022 and was devoted to the identification of forgery techniques. Dr. Nina Hadzhieva helped hugely with its organisation. Under the scientific guidance and expertise of Prof. Dr. Dr.Sc. Ilya Prokopov, the participants from Bulgaria and abroad were able to explore and test a variety of practices for the identification of forgery techniques; they were involved in intensive discussions and conducted practical experiments, amongst which XRF analyses on test materials. The force behind all activities of ACCSN is Assist. Prof. Dr. Lily Grozdanova, who has been my tireless and almighty strength during the last few years.

Now, three and a half years after our already legendary pre-Silvester cocktail afternoon of 2019, two of them marked by the COVID lockdowns, all five of us are allowed to say – "Yes, we achieved much!" and "Yes, We Can!". Hopefully you all, our guests this week, will feel that we deserve to be trusted as reliable partners in research and international projects on Greek, Macedonian, Roman and Thracian coinage.

Here I would like to pay homage to our beloved University Professor in ancient history and Thracian studies, the late *Prof. Dr. Dr.Sc. Margarita Tacheva* – an exceptional and bright personality, who was doing even the impossible, overcoming huge obstacles, to introduce her students to numismatics. I dare to hope that she would have been delighted and proud of what we, her students, have achieved so far.

Among us, there are two special colleagues, who should be named also with deep gratitude.

Firstly, the one whose merits to the Bulgarian numismatics have been numerous for 30 years already, starting in 1993. *Prof. François de Callataÿ* has promoted the achievements of Bulgarian numismatists via joint publications, presenting books of Bulgarian researchers in prestigious editions, participating in research projects administered by scholars from Sofia University, etc. Because of all this, Sofia University distinguished him with the honorary degree of *doctor honoris causa*.

The second name is *Dr. Ulrike Peter*, with whom we have a long history of collaboration and who has been helpful for over twenty years. Her efforts were recognized by the General Assembly of the National Archaeological Institute with Museum at the Bulgarian Academy of Sciences, which elected her as honorary member of the Institute.

All listed achievements would not have been possible without the enthusiastic and tireless support of the Dean of our faculty, the Faculty of History at Sofia University, *Prof. Dr. Mira Marko-*

*va*. To her, we are deeply grateful beyond possible words.

We owe sincere thanks also to the management of Sofia University, and personally to *Prof. Eliza Stefanova*, Vice-rector and coordinator of activities 3.1 and 3.2 of the project *Sofia University Marking Momentum for Innovation and Technological Transfer* (SUMMIT), as well as to the building manager of the Rectorate, *Boris Angelov*, for all-round support in organizing our conference.

On our way, we found supportive partners:

National Archaeological Institute with Museum at the Bulgarian Academy of Sciences

First Investment Bank

Regional History Museum – Sofia

Regional History Museum – Blagoevgrad

History Museum Petrich

To all of them, we also extend our sincere thanks.

The conference was conducted within the framework and as a result of the cooperation of the following projects:

SUMMIT: Sofia University Marking Momentum for Innovation and Technological Transfer

№ BG-RRP-2.004-0008 - summit.uni-sofia.bg

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*Thank you for your attention!*

Prof. Dr. Dr.Sc. Dilyana Boteva-Boyanova (Sofia University),

In the name of the Organising Committee

# Coins of the Roman Bithynia Known in Western Europe in the 16th Century

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**Abstract:** The purpose of this article is to discuss coins from Roman Bithynia described in the oldest printed works including coins of the eastern provinces. These works are: *Discorso sopra le medaglie antiche* by Sebastiano Erizzo (1525–1585) and *Imperatorum Romanorum numismata* by Adolphus Occo (1524–1606). In the former appeared (in the second edition of 1568) a total of five coins of the KOINON BEIΘYNIAC types, from Nikaia and Herakleia Pontika, while in the latter appeared a total of ten KOINON BEIΘYNIAC types, as well as others from Nikaia and Nikomedia. An attempt was also made to identify the coins described by 16th-century authors with the types present in contemporary collections and their catalogues (Rec Gen 1910, RPC), and to clarify errors in the transcription of their legends.

**Keywords:** Roman provincial coins, Koinon of Bithynia, Herakleia Pontika, Nikaia, Nikomedia, Sebastiano Erizzo, Adolphus Occo.

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The mid-16th century marked a significant period in the study of ancient Greek and Roman coins. Guillaume Budé (1467–1540) explored metrology and ancient (including Greek) denominations in *De asse et partibus eius*, the earliest printed book on ancient coins (1514).[1] Three years later, Andrea Fulvio introduced the first "iconographic" approach in his work *Illustrium imagines* (see Berghaus 1997, iii). The first author to devote his work also to coin reverses, thereby beginning actual numismatics, was Enea Vico (c. 1523–1567). His *Le imagini con tutti i riversi trovati et le vite de gli imperatori tratte della medalgie et dalle historie de gli antichi* (first edition 1548) and *Discorsi… sopra le medaglie de gli antichi divisi in due libri* from 1555 (see Dekesel 1997, 971–979), however, are devoted exclusively or almost exclusively to imperial coins.[2]

The first work to discuss a range of provincial coins in addition to the dominant Roman imperial coins is *Discorso sopra le medaglie antiche* by Sebastiano Erizzo (1525–1585), first published in Venice in 1559.[3] The purpose of this article is to compare the coins of Bithynia present in Erizzo's work and *Imperatorum Romanorum numismata* by Adolph Occo (1524–1606), first published in Antwerp in 1579, and to try to answer how much knowledge of provincial coins from the major centres of northwest Asia Minor increased in Western Europe in the second half of the 16th century, and to what extent the early modern descriptions of coins allow the identification

[1] See Budé 1514. On subsequent editions and first translations of this work, see Dekesel 1997, 171–200.
[2] Only his *Le imagini delle donne auguste intagliate in istampa di rame* include an Alexandrian tetradrachm with a portrait of Poppea, see Vico 1557, pl. XLVI.
[3] See Dekesel 1977, 359 and 360–362 (on the 1568 and subsequent editions) and Babelon 2004, 79.

of particular Bithynian types in modern catalogues.

An increased knowledge of Bithynian coins can already be seen in subsequent editions of Erizzo's *Discorso*. The first edition describes only one Bityhnian coin, i.e. Commodus' bronze of Nikaia as "a medal of Marcus Commodus at a fairly young age, Greek, large, of yellow metal, with such letters: ΛΟΥΚΗ. ΚΟΜΟΔΟC. ΚΑΙCΑΡ, that is L. Commodus Caesar" (Erizzo 1559, 361: "*la medaglia di M. Commodo, Greca, grande, di metallo giallo, in assai gioueni le età, con lettere tali:* ΛΟΥΚΗ. ΚΟΜΟΔΟC. ΚΑΙCΑΡ*, cio è L. Commodus Caesar"*) and the reverse with "two figures, one sitting on a chair, which is Jupiter, the other standing, sacrificing to Jupiter, which is the figure of Commodus, with letters such underneath: ΝΙΚΑΙΕΩΝ" ("*due figure, l'una sedente sopra una sedia, che è Giove, l'altra in piedi, che sacrifica à Giove, ch'è la figura di Commodo, con lettere tali sotto:* ΝΙΚΑΙΕΩΝ"). The description and the woodcut in Erizzo's book showing the reverse allow identification of this "medal" with the large bronze (AE30) of Nikaia (type Rec Gen 1910, 236, pl. LXXIII, 8; RPC IV. 1 [temporary] 5982), with the difference, however, that the actual obverse legend of the coin is Λ ΑΥΡΗ ΚΟΜΟΔΟC ΚΑΙCΑΡ (**Fig. 1**). The only other coin related to Bithynia, although minted in Rome, that appears in the first edition of *Discorso*, is "a large coin of beautiful metal" (Erizzo 1559, 244: "*la medagila grande di bel metallo*") of Hadrian with the reverse legend RESTITVTORI BITHYNIAE, which can be identified with a sesterce of the type RIC III.3, 1840–42.

**Fig. 1.** Bithynia, Nikaia. Commodus (as Caesar), AD 175–177. Obv. Λ ΑΥΡΗ ΚΟΜΟΔΟC ΚΑΙCΑΡ, bare head of Commodus (youthful) with traces of aegis to right; on aegis, Medusa head. Rev. to left, emperor standing, right, wearing toga, holding patera over thin round altar; to right, statue of Zeus seated, left, holding patera and long sceptre, resting feet on base, ΝΙΚΑΙΕΩΝ in ex. Rec Gen 1910, 236, pl. LXXIII.8; RPC IV.1 (temporary) 5982. Diameter 29 mm, weight 15.08 g. (Photo: BnF: https://rpc.ashmus.ox.ac.uk/coin/188958).

**Fig. 2.** Koinon of Bithynia. Hadrian, AD 121–138. Obv. ΑΥΤ ΚΑΙC ΤΡΑΙ ΑΔΡΙΑΝΟC CEBA, laureate head of Hadrian to right. Rev. ΚΟΙ-ΝΟΝ / ΒΕΙΘΥΝΙΑC, octastyle temple on podium of two steps; in pediment, pellet. Rec Gen 1910, 41; RPC III, 992. Diameter 35 mm, weight 25.97 g. (Photo: Künker, auction 288 [13 Mar. 2017], 561).

In the second edition of Erizzo's work, however, three new types[4] appear: "a large and a small Hadrian's coin of beautiful metal" (Erizzo 1568, 393: "*la medaglia di Adriano grande, & picola, & di bellissimo metallo*") with the "beautiful temple" ("*bellissimo tempio"*) on the reverse and legend ΚΟΙΝΟΝ ΒΕΙΘΥΝΙΑC,[5] as well as "a still large" coin (Erizzo 1568, 394: "*ancora grande*") of Sabina with the obverse legend CЄBACTH CABЄINA and the reverse with "a beautiful temple with three deities within it" ("*un bellissimo tempio con tre deità dentro di quello*"), and the Greek legend ΚΟΙ-ΝΟΝ ΒΕΙΘΥΝΙΑC. The first two, which Erizzo connects to the sesterces he describes with the legend RESTITVTORI BITHYNIAE (Eizzo 1563, 394), can be identified with large bronze coins RPC III, 992; Rec Gen 1910, 41 (**Fig. 2**) and the small ones RPC III, 999; Rec Gen 1910, 48 or 48 var. (**Fig. 3**), or similar,[6] while the coin minted for Hadrian's wife can be unambiguously identified with type RPC III, 988 or 1022 (**Fig. 4**). According to the modern reference catalogue, these three deities

[4] For Commodus' coin described already in the 1559 edition see Erizzo 1568, 530.
[5] In Erizzo's work: ΒΕΙΘΥΝΙΑS.
[6] But also RPC III, 989–995, 1002-1004, 1009–1015 and 1017–1019 for large bronzes, and 999–1000, 1007, 1007a and 1021 for small bronze denominations (Æ 20–22) are possible.

comprise the Capitoline triad: in the centre, Zeus (Jupiter) stands facing, resting with right hand on long sceptre, between Hera (Juno), left standing right and Athena (Minerva), right ("Standing left Hera rests with left hand on long sceptre. Athena crowns Zeus and holds an aphlaston in her left hand; below, prow."). In the same edition of *Discorso*, a small coin of orichalcum ("*piccola, di metal giallo*") minted in Herakleia Pontika for Geta is described. Its obverse bears the legend Π. CEΠTI. ΓETAC and reverse the legend HPAKΛHAC EN ΠONTΩ and "a beautiful naked figure, holding a patera with his right hand and in his left hand he has" the author "does not know what" (Erizzo 1568, 636: "*una bella figura ignuda, che con la destra tiene una patera & nella sinistra ha non so che*"). The type of this rare coin is also known from contemporary collections (Rec Gen 1908, 153; SNG von Aulock 394), as is a figure on the reverse, perhaps (according to Rec Gen 1908) Agathodaimon, holding patera and two ears (**Fig. 5**).

**Fig. 3.** Koinon of Bithynia. Hadrian, AD 121–138. Obv. AVT KAIC TRAI AΔPIANOC CЄB, laureate head of Hadrian to right. Rev. KOI-NON / BЄIΘYNIAC, octastyle temple on podium of two steps, with three pellets in pediment. Rec Gen 48 var.; RPC III, 999. Diameter 22 mm, weight 6.17 g. and 6.73 g (Photo: Nomos AG, auction Obolos 26 [18 Dec. 2022], 342 and 6 [20 Nov. 2016], 637).

**Fig. 4.** Koinon of Bithynia. Sabina, AD 128–136/7. Obv. CABЄINA CЄBACTH, draped bust of Sabina to right, with hair coiled and piled on top of head above double stephane. Rev. KOI-NON / BEIΘYNIAC, distyle temple set on base with two steps; within, the Capitoline Triad: Zeus standing right, holding long sceptre in his right hand, between Hera, on the left, standing right and holding long sceptre in her right hand, and Athena, on the right, standing left, holding aphlaston in her left hand and crowning Zeus with a wreath held in her right; in pediment, sacrificing Genius or Hadrian (?) standing facing between two pellets, holding sceptre in his left hand and sacrificing with his right above lit altar; in exergue, prow. Rec Gen 1910, 59; RPC III, 1022. Diameter 35 mm, weight 23.83 g (Photo: Roma Numismatics XXII [8 Oct. 2021], 535).

**Fig. 5.** Herakleia Pontika. Geta (as Caesar), AD 198–209. Obv. Π CEΠTI ΓETAC, draped and cuirassed bust of Geta to right. Rev. HPAKΛHAC EN ΠONTΩ, a figure on the reverse, perhaps Agathodaimon, holding patera and two ears. Rec Gen 1908, 153; SNG von Aulock 394. Diameter c. 20 mm, weight 4.56 g (Photo: Gorny&Mosch Giessener Münzhandlung, auction 155 [3 Mar. 2007], 213).

Erizzo's work was one of the sources of *Imperatorum Romanorum numismata* by Adolph Occo, doctor of medicine from Augsburg, published in 1579 (expanded editions appeared in 1601, 1625, and 1683).[7] However, there are only two references to the Venetian author in the description of coins from Bithynia (Occo 1579, 165 and 328). Occo introduces the classification of coins according to obverse legends and the correspoding reverses. In the case of coins with Greek legends, he recorded reverses from different mints under a given variant of the imperial titulature.

Among the reverses subordinated to the legend AYT. KAIC. TRAI. AΔPIANOC CЄB., the type with the temple and the KOINON legend, already described by Erizzo, is the first to appear (Occo 1579, 163). Since the same obverse legend appears on all types of bronzes, it cannot be resolved whether Occo included the higher denominations of 32–35 mm (RPC III 991, 993, 995, 1002–1004, 1017 and 1018) in diameter or the smaller ones (RPC III 996, 1000, 1005–1013A, 1016). The legend of the coin struck for Sabina by the koinon of Bithynia is cited after *Discorso* (Occo 1579, 165 refers to "Erizzo, 394"), although the description "quadrangular tower with ornaments" ("*turris quadrangula cum suis ornamentis*") refers to a different coin. Another coin from the province of Bithynia is that of Nikomedia minted for Antoninus Pius with the obverse legend AYT. KAICAP ANTΩNINOC and reverse legend MHTPOΠOLЄOC NIKOMHΔЄIAC, and "a half-naked figure standing and holding round shields (*clipei*) in both hands" (Occo 1579, 182: "*Figura seminuda stans, utraque manu veluti clypeos tenens"*). The description of this coin does not allow its clear identification. Occo may be trying to characterise here a small bronze denomination Rec Gen 1910, 66, which has the same legends, and its reverse shows Hermes standing on a base, facing, wearing a mantle and crossing arms in front of his chest (**Fig. 6**). The crossed arms of the god may have looked like oval shields to the Augsburg author. Another coin from Bithynia, which Occo included in his work, is again a bronze from Nicomedia – minted in the time of Marcus Aurelius with the obverse legend AY KAI. M. AYPHΛI. ANTωNINOC and reverse NEIKOMH. MHTPO NЄΩKO and with "a figure standing in the temple, with her right hand lifting ears, it seems, in her left holding a spear" (Occo 1579, 200: "*Figura stans in templo, dextra spicas, ut videtur, deorsum porrigens, sinistra hastam*"). The closest to the coin described in 1579 seems to be the Rec Gen 1910, 82 or 83 type, with the difference, however, that the first type in the early 20th-century catalogue notes a shorter obverse legend AYT K M AY ANTΩNЄINOC and longer reverse legend: MHTP NЄΩK NЄIKOMHΔ, while the other has only a slightly different obverse legend AYT KAI M AYPH ANTΩNINOC and a different, more complete reverse legend MHTPOΠ KAI ΠPΩT NEΩKOPOY and NIKOMHΔEI in exergue. On the other hand, the coin of Commodus with the obverse legend AYT. KAI. AYP. KOMMOΔOC ANTΩNINOC and reverse legend NIKOMIΔЄΩN ΔI NЄΩKOPΩN can be accurately identified thanks to the very distinctive iconography of its reverse: "a praetorian ship with three banks of oars, full, and two most beautiful temples" (Occo 1579, 224: "*Triremis praetoria referta nauis; et duo templa pulcherr[ima]*"). The coin so described best matches the Rec Gen 1910, 165 type, which, however, has a slightly different obverse legend: AYT K M AYP KOMMOΔOC ANTΩNINOC (**Fig. 7**). The coin described as such best matches the Rec 165 type, which, however, has a slightly different obverse legend, and one must admit that some of the known specimens have the initial part of the obverse legend effaced or deficient.[8] Occo first described three coins from Septimius Severus' Nikomedia: one with the obverse legend AYT. K. Λ. CЄΠT. CЄOYHPOC AYΓ. and the reverse legend NIKOMIΔΩN and 'Jupiter sitting with a spear in his left hand' (Occo 1579, 251: '*Iuppiter sedens, sinistra hastam*') and the two others with the obverse legend AY. K. Λ. CЄΠTI. CЄOYHPOC Π. or AY. K. Λ. CЄΠTI. CЄOYHPOC ΠЄP (Occo 1579, 250) and the emperor's head in a *corona radiata*; their reverse features "a temple with eight columns" (Occo 1579, 251: *"Templum octo columnarum"*) and a longer legend: NIKOMHΔЄΩN ΔIC NЄΩKOPΩN (Occo 1579, 250) or NIKOMIΔЄΩN ΔIC NЄΩKOPΩN (Occo, 1579, 251). The first type of Severus coins has no direct parallel among coins known today. However, the description

[7] See Dekesel 1997, 672; Dekesel 2003, 1963–1964 (only 1601 and 1625 editions); for Occo and the significance of his work: Babelon 2004, 78–79 and Kluczek 2019, 25–37. References to Erizzo appear in the first edition of Occo's work 19 times – see Occo 1579, 4, 83, 143, 165, 200, 212, 221, 235, 243, 292, 299, 304, 306, 320, 323, 328, 345–346, but in Occo (1625) *Discorso* is quoted 50 times.
[8] Including the specimen illustrated in Rec Gen 1910 (pl. XCII. 37).

of the second two coins corresponds to types Rec Gen 1910, 178 (**Fig. 8**) or 185,[9] except that in the case of both Septimius Severus' and the earlier Commodus' coins, the issuer's name is written as NIKOMHΔЄΩN, not NIKOMIΔЄΩN, which is probably an error made under the influence of Byzantine Greek pronunciation prevalent in the 16th century (see Tomè 2017, 86). Very interesting is the description of another coin – a bronze of Caracalla also from Nicomedia. Its legends are ANTΩNЄINOC AYΓOYCTOC on the obverse and NIKOMHΔЄΩN ΔIC NЄΩKORΩN on the reverse. In addition, there is supposed to be "a figure folding her lips for a kiss with a great serpent in front of her" (Occo 1579, 265: "*Figura insistens basi cum magno coram ipsa serpent*") on the reverse. This description seems to match the Rec Gen 1910, 225 type showing 'the serpent Glykon in coils with a large human head without a beard' (**Fig. 9**).

**Fig. 6.** Nikomedia. Antoninus Pius, AD 138–161. Obv. AYT KAICAP ANTΩNEINOC, Laureate head of Antoninus Pius to right. Rev. MHTPOΠOΛE NIKOMHΔI, Herm of veiled Hermes standing on base, facing, wearing mantle and crossing arms in front of chest. Rec Gen 1910, 66; RPC IV.1, (temporary) 10436. Diameter 17 mm, weight 3.71 g (Photo: Classical Numismatic Group, electronic auction 363 [11 Nov. 2015], 286).

**Fig. 7.** KNikomedia. Commodus (as Augustus), AD 180–182. Obv. AYT K M AYP KOMMOΔOC ANTΩNINOC, laureate-headed bust of Commodus (lightly bearded) wearing cuirass and paludamentum to right. Rev. NIKOMHΔЄΩN / ΔIC NЄΩKORΩN, galley with six rowers, left; on stern, two standards; in background, two temples with eight columns each. Rec Gen, 1910, 165; RPC IV.1, (temporary) 5641. Diameter 34.6 mm, weight 23.11 g (Photo: Numismatica Ars Classica, auction 51 [7 Oct. 2009], 486).

**Fig. 8.** Nikomedia. Septimius Severus, AD 193–211. Obv. AY K Λ CЄΠTI CЄOYHPOC Π, radiate head of Septimius Severus to right. Rev. NIKOMHΔЄΩN / ΔIC NЄΩKORΩN, Octastyle temple, with pellet in pediment. Rec Gen, 1912, 178. Diamater 33 mm, weight 24.94 g (Photo: Classical Numismatic Group, electronic auction 381 [24 Aug. 2016], 301).

**Fig. 9.** Nikomedia. Caracalla (as Augustus), AD 198–217. Obv. ANTΩNЄINOC AYΓOYCTOC, laureate head of Caracalla to right. Rev. NIKO(MH)ΔЄΩN ΔI-C NЄΩKORΩN, the serpent Glycon coiled right, with human head. Rec Gen, 1912, 226 var. (bust type). Diameter 26 mm, weight 11.49 g (Photo: Classical Numismatic Group, electronic auction 344 [12 Feb. 2015], 311).

[9] Although a variant of the legend with the abbreviation s CЄΠTI ΠЄP is not attested in contemporary literature on the subject and available online databases.

The transcription of the obverse legend of popular coin types of Severus Alexander from the Nikaia mint is problematic. Adolph Occo cites a reverse with "three military signs" ("*Tria signa militaria*") and the legend NIKAEEΩN (sic!) and NIKAIEΩN under the obverse legend AYT K. M. AYP. CЄB. AΛЄΞANΔPOC (Occo 1579, 288) and only AΛЄΞANΔPOC (Occo 1579, 290). He confuses the abbreviation AYT(οκράτωρ) with AYΓ(ουστος) here, while the legend with only the name AΛЄΞANΔPOC is not attested. The actual legend for the type Rec Gen 1910, 617 (**Fig. 10**) and its several variants (RPC VI temporary No. 3201–3203 and 30139) is M AYP CEYH AΛEZANΔPOC AYΓ CEY(H) or M AVP AΛEZANΔPOC A(Y)(Γ) (or AYΓ or AYΓ). The NIKAEE reverse legend is also uncertified. Many surviving specimens do not have a complete legend, which excuses the author's mistake. However, he could have noticed that during the Severan dynasty, instead of the Greek translation of the title Augustus (σεβαστός) a transliteration was spread in Bithynia.

**Fig. 10.** Nikaia. Severus Alexander, AD 222–235. AE 21 (20.5 mm, 5.07 g, 1 h). M AYP CEY AΛEZANΔPOC AY, laureate head of Severus Alexander to right. Rev. NI K AI E/ ΩN, three military standards topped with wreaths. Rec Gen 1912, 617; RPC VI, (temporary) 3195. Diameter c. 20 mm, weight 5.63 g. (Photo Dr. Busso Peus Nachf., e-auction 10 [18 Jan. 2020], 632).

A comparison of two major works from the second half of the 16th century, which included descriptions of coins from Roman Bithynia, shows a clear increase in the number of known KOINON BEIΘYNIAC coin types and types minted mainly in Nikaia and Nikomedia. In the first edition of *Discorso* by Erizzo, only one rare bronze of Commodus struck in Nikaia is described (Rec Gen 1910, 236); in the second edition of his work (1568) there are already five different coins from Bithynia: three of the types of Koinon of Bithynia (RPC III 992 and 999 or similar, and 988 or 1022), the aforementioned Nikaia bronze of Commodus, and the rare bronze of Geta minted in Herakleia Pontika (SNG von Aulock 394). Occo describes as many as ten types of coins from Bithynia (KOINON BEIΘYNIAC, Nikaia, Nikomedia) a mere 20 years after *Discorso* was first published.

While the number of a dozen coins of Bithynia described in works from the second half of the 16th century may not seem like much, it should be remembered that the entire area of the former Roman province in northern Asia Minor was by then already under the rule of the Ottoman Empire for more than 100 years, which was hostile to the countries of Christian Europe. In the case of Erizzo, who based his work on research in Italian collections, it can be assumed that some of the coins known to the author of *Discorso* arrived there as late as the 14th and 15th centuries, along with Byzantine immigrants. The popularity of coin collecting in Augsburg is evidenced by a list of as many as 28 collectors and/or scholars of ancient coins associated with the city, as reported by Hubertus Goltzius (1526–1583) in his famous work *C. Iulius Caesar sive historiae imperatorum caesarumque Romanorum ex antiquis numismatibus restitutae liber primus* (Goltzius 1563, bb), in which he lists 978 numismatists he encountered in the Netherlands, Germany, Italy, and France. Augsburg appears to be the city with the most numerous numismatic centres. Even if we deduct the Emperor Ferdinand I (1503–1564) and his son, Archduke Ferdinand II (1529–1595), mentioned by Goltzius as being temporarily in the city, 27 numismatists of Augsburg remain. This is a larger number even than that of Venice (25 names), and is surpassed only (slightly) by Paris (28 names), Naples (47), and Rome (71). The Augsburg numismatists included as many as seven physicians (including Occo), but also, for instance, Vladislaus Vliscon, "Pannonius", i.e. the Hungarian who may have come into direct contact with the Turks. Nevertheless, it seems that ancient coins of Bithynia and other Roman provinces were also flowing into the receptive western European market during the peak of the Ottoman Empire's expansion in the 16th century. The growth in the number of collections, as well as numismatic works in the second half of the 16th century, however, meant that authors such as Occo knew some of the coins only by description, which implied the presence of the errors noted above in the transcription of Greek legends.

**Bibliography**

Babelon, E., 2004. Ancient Numismatics and Its History, translated by Elizabeth Saville. Spink & Kolbe, London and Crestline.

Berghaus, P., 1997. Foreword to Dekesel 1997, iii=iv.

Budé, G., 1514. De Ase et partibus eius libri quinque. Josse Bade, Paris.

Dekesel, C. E., 1997. Bibliotheca nummaria. Bibliography of 16th Century Numismatic Books. Illustrated and Annotated Catalogue. Spink, London.

Dekesel, C. E., 2003. Bibliotheca nummaria. Bibliography of 17th Century Numismatic Books. Illustrated and Annotated Catalogue. Spink, London.

Goltzius, H., 1563. C. Iulius Caesar sive historiae imperatorum caesarumque Romanorum ex antiquis numismatibus restitutae liber primus. Adolph Mekerch, Burges.

Kluczek, A. A., 2014. "Jak rzymski cesarz Trajan zdobył Indie: epizod z historii numizmatyki albo popis nowożytnego erudyty: Adolf Occo i jego dzieło." Wieki Stare i Nowe 7, 24–62.

Occo, A., 1579. Impp. Romanorum numismata a Pompeio Magno ad Heraclium; quibus insuper additae sunt inscriptiones quaedam veteres, arcus triumphales, et alia ad hanc rem necessaria. Christophe Plantin, Antwerp.

Occo, A., 1625. Impp. Romanorum numismata a Pompeio Magno ad Heraclium. Editio altera, multis nummorum millibus aucta. Augsburg.

Rec Gen 1908. Waddinton, W., Babelon, E., and Reinach, Th. Recuiel Général des Monnaies Greques d'Asie Mineure. Vol. I.2, Ernest Leroux, Paris.

Rec Gen 1910. Waddinton, W., Babelon, E., and Reinach, Th. Recuiel Général des Monnaies Greques d'Asie Mineure. Vol. I.3, Ernest Leroux, Paris.

RIC III.3. Abdy, R., The Roman Imperial Coinage, vol. II, part 3, with a section on medallions by P. F. Mittag. Spink, London, 2019.

RPC II-VI. https://rpc.ashmus.ox.ac.uk/ (accessed February 29, 2024)

SNG von Aulock. Sylloge Nummorum Graecorum. Deutschland. Sammlung Hans von Aulock, vol. 1: Pontus, Paphlagonia, Bithynia, Mysia, Troas, Aiolis, Lesbos, Ionia. Gebr. Mann Verlag, Berlin, 1957.

Tomè, P., 2017. Greek Studies in Giovanni Tortelli's Orthographia: A World in Translation, in: Ciccolella, F., Silvano, L. (Eds.), Teachers, Students, and Schools of Greek in the Renaissance. Brill's Studies in Intellectual History, vol. 264. Brill, Leiden, 79–119.

Vico, E., 1557. Le imagini delle donne auguste intagliate in istampa di rame; con le vite, et ispositioni. Eena Vico & Vincenzo Valgrisio, Venice.

# The End of the Roman Provincial Coinage in Moesia Inferior in the Light of the Historical Reconstructions of the 3rd Century AD

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**Abstract:** Moesia Inferior was a border province strongly affected by the 3rd-century crisis, with an interesting evolution of the provincial monetary production and circulation during the period. The subject of the present research implies one complex question: what are the causes of the end of the local coin production here? During the period in question, a profound and complex change occurred in conjunction with the evolutions registered throughout the empire: from an area supplied through a dual monetary system (consisting of both imperial and provincial coinage) the area was integrated into the new economic framework based on the imperial mints. It could be stated that this process resulted from the combined action of various factors: the relationship between the local and central systems (the influence of the imperial reforms and transformations of the monetary system), external attacks, and the internal stage of development of the provinces. But how did all these factors combine and influence the cities of Moesia Inferior?

**Keywords:** 3rd-century crisis, Moesia Inferior, Dual monetary system, Imperial mints, Provincial mints.

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## Introduction

The main question of the current research refers to the possible causes that could have led to the end of the Roman provincial coinage in Moesia Inferior. The subject is complex and implies numerous explanations, making it difficult to establish clear answers. As a result, this article would present in detail several preliminary explanations of this interesting phenomenon based on the information presently available.

The period under study begins with the accession of Septimius Severus to the Roman throne

(AD 193) and continues throughout the 3rd century AD. Important evolutions are observed from the starting point of our analysis, such as changes in the role of the army along with the increase in military expenditures, the debasement of the silver currency, numerous usurpations, and external attacks on the empire's frontiers. These aspects are considered of high relevance for the actual discussion that implies the presentation of several possible causes of the end of the Roman provincial coinage in Moesia Inferior (Corbier 2007, 333-336; Ando 2012, 1).

First, we will try to better determine the term 'crisis', for which many different definitions were presented by scholars (Grozdanova 2019, 20). The explanation that we consider to be the most suitable for our present analysis is that the so-called 3rd-century "crisis" was a period marked by deep, complex issues affecting most aspects of the Roman governance and of Roman life in general that didn't result in the fall of the state, but rather in its change and reconstruction in order to adapt to the new paradigm (Sergeyev 1999, 175; Grozdanova 2019, 20). This definition is important because it is linked with one possible cause for the end of the Roman provincial coinage in the whole empire, and not only in Moesia Inferior: the imperial reforms and their effects on the economic system.

The century under analysis ended with the creation of a new framework, whereby the old structure was replaced by a unitary system of coinage produced and controlled by a network of new imperial mints (Freeman et al. 2016, 248). Our objective is to analyse and better understand how these changes were determined or affected by political, military, and economic evolution, as the state was highly unstable during the 3rd century AD due to the rapid succession of rulers and usurpers, simultaneous attacks at the borders, and also to the evolving monetary crisis (Grozdanova 2019, 19–20).

The province under study has a long history under Roman influence on the region along the Danube. At the start of the Roman administration here (AD 15), the future Moesia Inferior was part of a bigger province called Moesia (Duch 2017, 30). Most probably during the reign of Claudius (Avram 1998, 307), the area between the Danube and the Black Sea, which included many cities that would receive the right to issue coins, was included in the province. It was Emperor Domitian who, in the context of his Dacian campaigns, decided to split Moesia into two provinces, Superior and Inferior (Matei-Popescu 2010, 25). Moesia Inferior's administrative borders continued to change: in AD 193, Markianopolis and Nikopolis ad Istrum were added to the province (Boteva 1996, 174). And finally, after the numerous and impactful events of the 3rd century AD, in AD 271 Dacia Ripensis was created in the territory of Oescus and the west of Moesia Inferior, while the eastern territory of Moesia Inferior was reorganised as the province Scythia Minor (Duch 2017, 32–33).

Regarding local mintages, the cities of this region started to produce their autonomous coinages long before the Roman rule.[1] The beginning of the Roman influence and administrative arrangement of the province of Moesia Inferior meant a new stage of activity for the cities' coinages as part of the Roman monetary system.

During this new epoch, the role of the imperial authority was one of the most important factors in determining the fate of the provincial coinage because the right to mint was given by the emperor to each of the cities (Bowman, Garnsey, Cameron 2007, 348; Weiss 2005, 57–58). For Odessus, the beginning of its coin production under Roman rule could be traced to the 1st century BC, during Augustus' reign (Varbanov 2005, 342). As far as Tomis is concerned, relatively recent studies put into light a different perspective on its Roman Provincial Coinage's beginning. Subsequently, the Tomitan coins which were dated during Augustus' reign (Regling 1910, no. 2576; RPC I, 1823A) are in fact later emissions of the city (Domitian, for the first, and Nero for the second) (Dima 2020, 368). As a result, the start of Tomis' coinage under the Roman rule is set for Tiberius' reign (AD 13-37) (Dima 2020, 375). In the 1st century AD, Histria began to mint under the emperor Claudius.[2] Antoninus Pius' reign was the starting point for the mint of Dionysopolis (Varbanov 2005, 80). Even if Nikopolis ad Istrum and Markianopolis were not part of Moesia Inferior when they started to mint

[1] For the examples of the autonomous coinage of Histria, Tomis, and Callatis see Talmațchi 2011.
[2] See the collection of Histria from the RPC database (https://rpc.ashmus.ox.ac.uk/search/browse?q=istrus).

under Roman rule (Antoninus Pius' and Commodus' reigns, respectively), their role in reconstructing the general picture of our topic is essential because during their peak and end of coin production, they were included in the province (Varbanov 2005, 110; Varbanov 2005, 201).

The provincial mints are characterised by interrupted production, an aspect that is influenced by the economic and political evolution of the city, but also by its relationship with the emperor (Weiss 2005, 57–58). For example, only Markianopolis and Nikopolis ad Istrum minted under the reign of Macrinus, and only Tomis produced coins under the rule of Maximinus Thrax (AD 235–238) (Bonchev 2017, 189). It is most probable that the right to mint was given to each city based strictly on their relationship with a respective emperor or his monetary policy in the region (Bottez, Talmațchi 2021, 491). It is not excluded that the right to mint could have been given to multiple local mints simultaneously, as was the case during Severus and Gordian III's rules (Pick 1898, 75; Dima 2018, 57). The starting point of the current analysis is represented by the Severan dynasty, during which several important evolutions could be distinguished in the monetary system.

During this specific time frame (AD 193–218), seven mints were active in Moesia Inferior (**Fig. 1**).[3] Beginning in AD 193, the army started to have an increasing role and therefore payment (Boteva 2010, 232; Boteva 1998, 77–80). This measure affected the economy of the whole empire and led to the devaluation of the denarius, but also to the peak of coin production in Moesia Inferior (Găzdac 2010, 104).

Both single coin finds and hoards will be important for the present analysis. The first category of numismatic material (single coin finds) is essential in the reconstruction of the economic situation of the studied cities because they reflect the denominations used at a certain point in their evolution and their frequency, but also the relationship between the imperial and provincial coinage at the local level. As far as the complexity of our study is concerned, the coin hoards are also an important source of data. They illustrate a bigger picture regarding the coin circulation in the province of Moesia Inferior, and also the possible turbulences linked to their burial or concealment. The role of coin hoards is reflected in the work of Ioannis Touratsoglou, who considers that this category of numismatic material could be associated with "the end of an epoch for a moneyed society" (Touratsoglou 2006, 163).

**Fig. 1.** Map of the active mints from Moesia Inferior between AD 193–244 (Created through the Roman Provincial Coinage platform by Ana-Maria Baltă and Valentin-Victor Bottez).

[3] Map created through the online platform RPC.

## The evolution of the Roman provincial coinage in Moesia Inferior between the Severan dynasty and Diocletian (end of the 2nd – 3rd century AD)

The first possible context of the end of the Roman coinage in the province was determined by the relationship between the central and the local coinage in this specific period. Even if the measures taken by the central authorities were not affecting the local mints in the same manner as the imperial ones did, their effects were still noticeable in the provinces.

At the central level in this period, the high production of denarii (because of the increase in the soldiers' salaries) led to its powerful devaluation (from 70% fineness at the beginning of AD 195 to 40% at the end of the same year) (Metcalf 2012, 504). As a result, the necessary quantity of bronze used for the high production of denarii was significantly increased, an evolution that could be linked to the scarcity of bronze coinage in the whole Roman Empire (Găzdac 2010, 101).

In Moesia Inferior between AD 193–218, the level of imperial issues such as denarii (12%) and antoniniani (0.8%) is visibly lower than the one of local coinage (75.2%) (**Fig. 2**; Găzdac 2010, Table E3). A possible explanation could be the fact that the mints from Moesia Inferior could have played a role in the supply of bronze coinage in the region (Găzdac 2004, 72). Dilyana Boteva also offers a pertinent context for the powerful local production: the numerous imperial visits of the Severan emperors in the region (Boteva 1998, 252). The high level of provincial coinage could have also been determined by an imperial policy of establishing the mints from the region as the main suppliers of bronze coinage there (Găzdac 2004, 72; Dima 2018, 55–57). A powerful argument for this statement is that mints such as Dionysopolis, Callatis, and Tomis regained their right to mint during Severus' reign after they lost it for showing support for Pescennius Niger (Boteva 1998, 248).

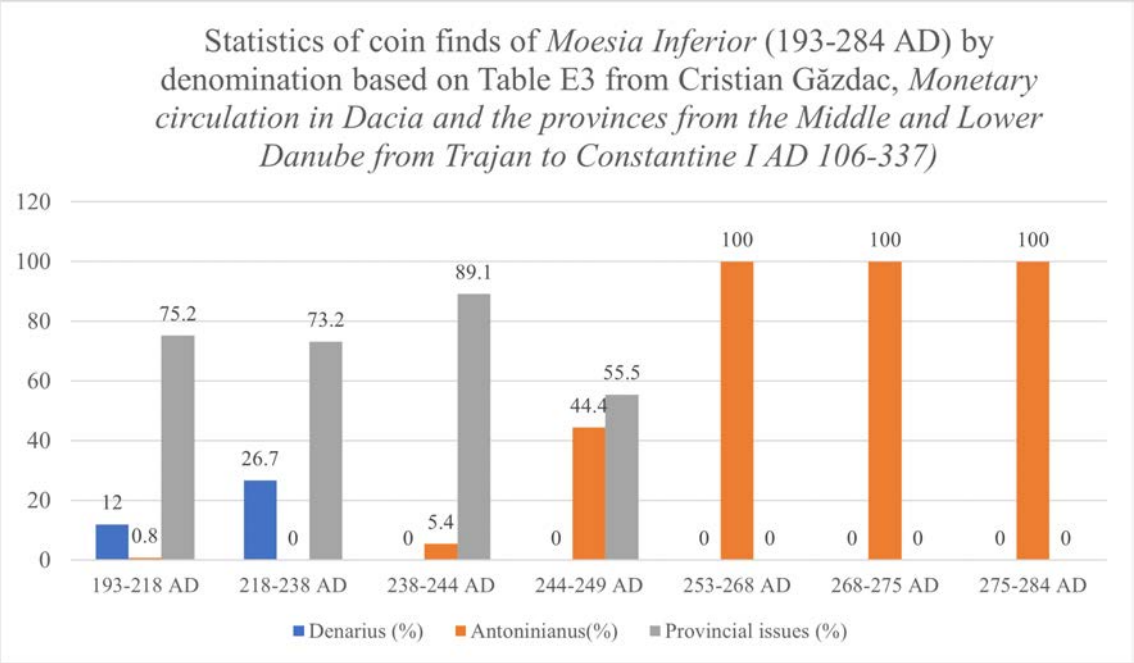


**Fig. 2.** Statistics of coin finds of Moesia Inferior (AD 193–284) by denomination, after Găzdac 2010, Table E3.

The next important moment in our study is the introduction of the antoninianus in AD 215. Under Macrinus (AD 217–218) and Elagabalus (AD 218–222), the two coins (denarius and antoninianus) existed very much simultaneously (Metcalf 2012, 504–514).

The prevalence of provincial issues is maintained both in central and local coinage during the next period (AD 218–238). In the mentioned statistics also used for the situation in AD 193–218,

the relationship between the central and the provincial coinage is as follows: the central issues – 26.7%, the provincial – 73.2% (**Fig. 2**; Găzdac 2010, Table E3). Even if during Elagabalus' and Severus Alexander's reigns, the number of denarii and antoniniani present in the province increased, the provincial coinage remained predominant (**Fig. 2**; Găzdac 2010, 97).

If until AD 238 the situation remained relatively stable, the mentioned year was a turning point from an economic point of view (Touratsoglou 2006, 165). The antoninianus was reintroduced after a period of absence, and this moment marked the replacement of the denarius in the monetary circulation – an aspect also visible in Moesia Inferior (**Fig. 2**).

From AD 238, the antoninianus began to expand its presence (Touratsoglou 2006, 165). In Moesia Inferior, the reintroduction of this coin would take effect only later. Between AD 238–244, it would have been present at a lower percentage (5.4%) in comparison with the provincial coins that reached their peak during this period, with 89.1% of the coin site finds from the province[4] (**Fig. 2**). We could consider that the high level of local issues is due to the continuity of the local mints during Gordian III's reign (**Fig. 1**). Another reason for maintaining the same relationship between the imperial and local coinage (the prevalence of the provincial production) during this period could also be the following theory: during the stages of the imperial economy's decline, the local mints were at their peak (Dima 2018, 55–57). This could be verified by the fact that between AD 238–244, the central system underwent serious changes and challenges because of the shift from the dominance of denarii to the one of antoninianii (Metcalf 2012, 516–517).

The situation in Moesia Inferior became even more difficult when the raids of the Transdanubian tribes began a new intensive stage in AD 238 – the year of the first Gothic invasion in the eastern part of the province (Touratsoglou 2006, 137–138). These events affected multiple centres of monetary production, and the mints of the studied province were in the same situation (Dima 2018, 57). The powerful effect of these events could be observed in the evolution of the number of active mints. Between AD 193–244, there were seven active mints in the province, and the coin production was also relatively stable. The year 244 marked the point from which we can identify only three active mints: Tomis, Callatis, and Markianopolis (**Fig. 3**).[5]

**Fig. 3.** Map of the active mints from Moesia Inferior between AD 244–249 (Created through the Roman Provincial Coinage platform by Ana-Maria Baltă and Valentin-Victor Bottez).

[4] The coin site finds are mentioned and explained by Cristian Găzdac in Table E3 - Aggregate site finds by denominations from Moesia Inferior.
[5] Map created through the online platform RPC.

It is after AD 249, when the raids in the Danube region became even more intensive, that the most important destruction of Histria in the period occurred – most probably during the invasion led by King Cniva, which also lead to the battles at Nikopolis ad Istrum and Abrittus (Isvoranu 2015, 59). In the 3rd volume of the "Histria" series, it is also mentioned that the years 249–253 (the period of the lowest level of monetary circulation in the region) could be correlated with the most critical periods for the Roman administration on the Danube frontier. During these years, the numerous attacks led to the sieges of Markianopolis, Novae, and Nikopolis ad Istrum, some of Moesia Inferior's most important cities (Touratsoglou 2006, 140). The attack on Markianopolis could also have significantly contributed to the end of its minting activity (Preda, Nubar 1973, 68).

The high number of coin hoards attested in Moesia Inferior during the invasions of the Transdanubian tribes during Gordian III's, Philip the Arab's, and Trajan Decius' reigns reveal the problematic context of the provinces under study – the violent raids of the Carpi (AD 245/246–247) and also the powerful invasion of the Goths and Carpi (AD 250/251) (Touratsoglou 2006, 154–155) (120 out of 181 total coin hoards that end between AD 193 and 284 – **Fig. 4**, **Fig. 6**).[6]

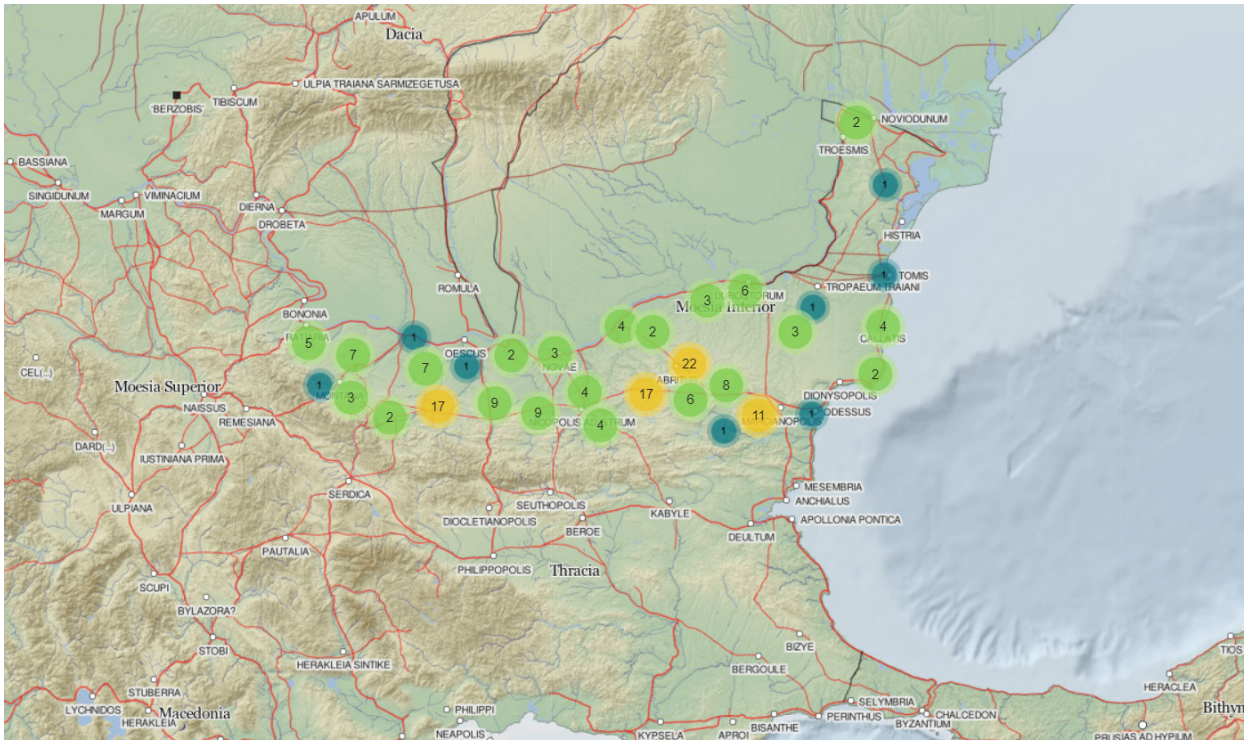


**Fig. 4.** Map of the coin hoards ending between AD 193 and 284 from Moesia Inferior (Created through the Coin Hoards of the Roman Empire platform by Ana-Maria Baltă and Valentin-Victor Bottez).

For Moesia Inferior, the peak of coin hoards ending with these specific reigns is during the same period as the end of the Roman provincial coinage (**Fig. 6**). Out of 181, only 39 contained provincial coinage (**Fig. 5**)[7], indicating that it disappeared from coin circulation. As mentioned, this process seems to also be influenced by the high devaluation of the silver coinage – see **Fig. 7** (Touratsoglou 2006, 166; Estiot 2012, 541–543). The role of the coin hoards in reflecting this type of turbulence and the end of a period is presented by scholars as follows: '[Hoard evidence] indicates the end of an epoch. This referred to a moneyed society in decline at all levels, obeying the rules of supply and demand' (Touratsoglou 2006, 163).

[6] Data provided through the online platform CHRE (Coin Hoards of the Roman Empire).
[7] Data provided through the online platform CHRE (Coin Hoards of the Roman Empire).

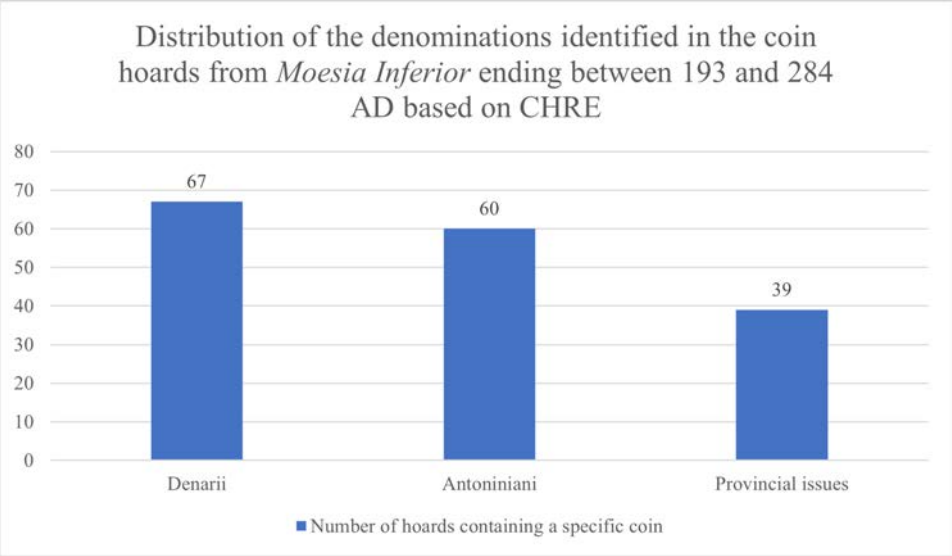


**Fig. 5.** Distribution of the denominations identified in the coin hoards from Moesia Inferior ending between AD 193 and 284 based on the data generated through CHRE – Coin Hoards of the Roman Empire.

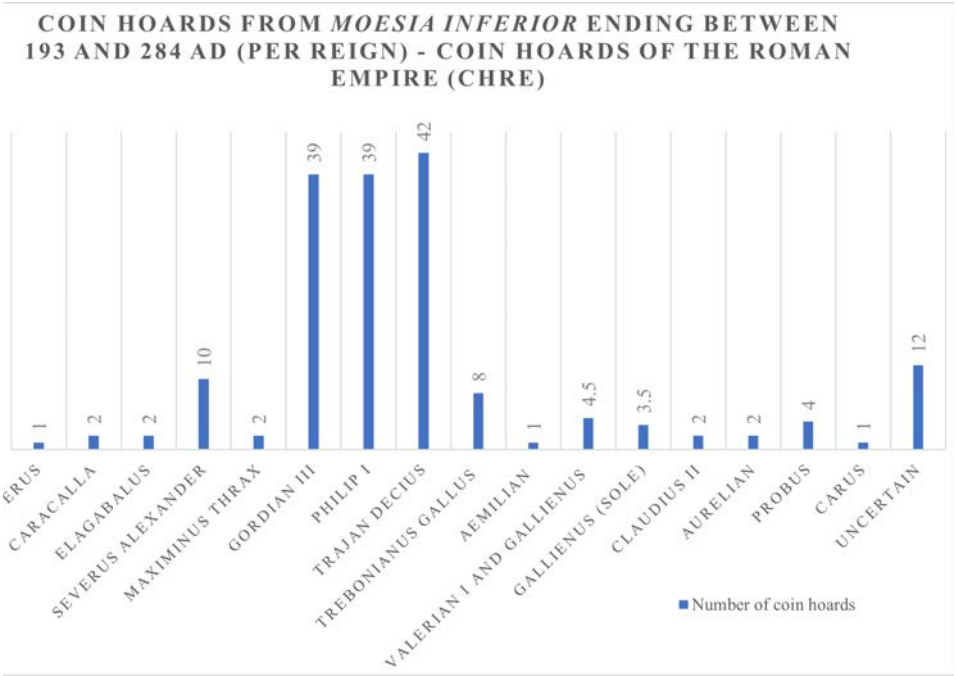


**Fig. 6.** Coin hoards from Moesia Inferior ending between AD 193 and 284 (per reign) based on the data generated through CHRE – Coin Hoards of the Roman Empire.

The local context had an important role in establishing the fate of the mints from Moesia Inferior, but the events that were affecting the whole Roman Empire (the economic crisis, the unstable character of the imperial institution, etc.) also had an essential influence. For example, the fast devaluation of the antoninianus (**Fig. 7**) strongly affected the provincial issues in the entire empire (Estiot 2012, 544).

As is visible in **Fig. 7**, after AD 250 the devaluation reached new peaks, and the silver denomination (antoninianus) had an increasingly low level of precious metal content (AD 253 – 35 % silver, AD 260 – 15 % silver, AD 268 – 2.5 % silver) (**Fig. 7**; Estiot 2012, 544). This evolution is also visible in Moesia Inferior (**Fig. 2**). Here, in AD 244–249, the antoninianus represented 44.4% of the coin finds considered by Cristian Găzdac in his work. In the same time gap, the provincial issues were present in 55.5% of cases. This is a serious decrease considering that in the previ-

ous stage (AD 238–244), during Gordian III's reign, the provincial coinage had a level of 89.1% (Găzdac 2010, Table E3). The debased coin was circulating in bigger amounts in the empire, and, more importantly, it became impossible to establish a relatively stable relationship between the silver currency and the bronze issues. This resulted in the production of bronze coins becoming uneconomical when the silver currency contained less precious metal, causing difficulties in the establishment of a stable ratio between the two denominations. This directly affected the production of bronze coinage in the whole empire, until its production stopped for a period in all its regions and provinces (Eliot 2012, 543).

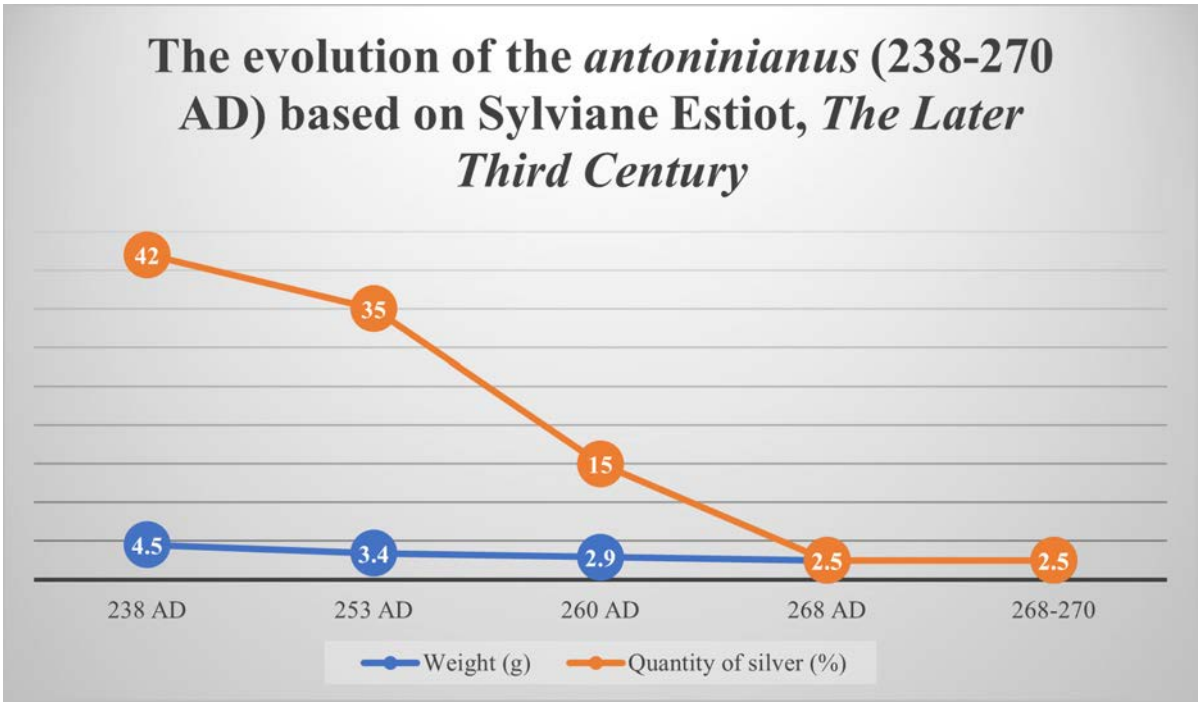


**Fig. 7.** The evolution of the antoninianus (AD 238–270), after Estiot 2012.

The reforms of Gallienus, Aurelian, and Diocletian could be seen as essential steps in the shift towards the unitary monetary system. First, Gallienus enacted significant changes. Mints in the proximity of the army started to be used intensively to produce imperial issues of debased antoniniani. Relevant examples are Trier, Mediolanum, Siscia, and Cyzicus. But this was not the only decision. The mint of Rome also underwent multiple changes: the number of officinae was increased from six to twelve (Corbier 2007, 349). The new framework could be distinguished in the statistics of coin finds from Moesia Inferior as between 253–268, the mint of Rome dominated the local monetary circulation (62.5%), followed by the new mints from Mediolanum and Siscia (both with 12.5%) (**Fig. 8**; Găzdac 2010, Table P5).

After AD 253, the territory of the empire seemed to be flooded by the debased central coinage struck in multiple mints (Găzdac, Alföldy-Găzdac 2008, 144). Another important aspect could be the fact that the mass production of debased antoniniani might have led to the cessation of imperial bronze coins and of provincial bronze coins (Bowman et al. 2007, 348).

The shift towards a unified system would continue and became even more clear with the introduction of new reforms. One of them was implemented by Aurelianus. When he came to power, the situation was critical. At the mint of Rome, he punished the workers of the central mint, who were responsible for actively worsening the process of debasement of the coinage. They were sent to Serdika – the minting centre in one of the new Dacia provinces (one of the provinces created after abandoning the old province north of the Danube). After their punishment, the reform of Aurelian was introduced in AD 274, and its main scope was to reintroduce the trimetallic system from the time of Caracalla. This marked the appearance of the aurelianus with a weight of

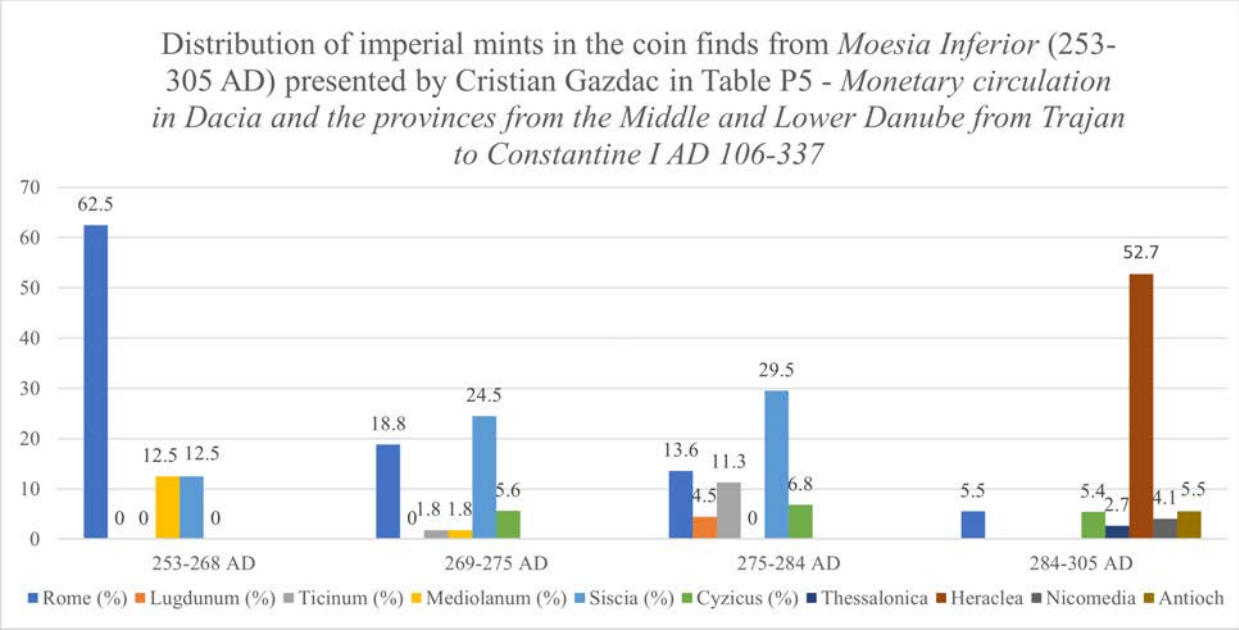


**Fig. 8.** Distribution of imperial mints in the coin finds from Moesia Inferior (AD 253–305), after Găzdac 2010, Table P5.

4.03 g. The other element of the system was the laureate denarius. The aureus was also stabilised at its level from the period of Caracalla (Estiot 2012, 546).

Besides the new structure of the monetary system, the network of mints was changed compared to the earlier structures (Estiot 2012, 546). Even from Aurelianus' period, we could observe the growing importance of the imperial mints that were producing the reformed coinage (eight mints – Lyon, Rome, Ticinum, Siscia, Serdika, Cyzicus, Antioch, and Tripolis with 39 officinae) (Bowman et al. 2007, 349). The local configuration of the coin finds from Moesia Inferior shows the powerful influence of the new reforms (**Fig. 8**; Găzdac 2010, Table P5). Between 260 and 275, the new mints are present in the statistics with relatively high levels: Siscia (24.5%), Cyzicus (5.6%), Mediolanum (1.8%), and Ticinum (1.8%) (**Fig. 8**).

The new framework would continue to develop even further with the introduction of Diocletian's reforms that would mark the end of the Roman provincial coinage in the whole empire. The components of the new imperial monetary framework were the argenteus (80% silver), the nummus (with the universal type GENIO POPULI ROMANI and 4% silver), the neo-aurelianus, neo-denarius, and denarius communis (Estiot 2012, 548).

The reform is also reflected through the creation of new mints such as Trier, Aquileia, Carthage, Heraclea, Nicomedia, and Thessalonica (Bowman, Garnsey, Cameron 2007, 181). Even regarding the current reform, the strong relationship between the central level and the local one could be reflected by the presence of the newly established mints in the coin circulation of Moesia Inferior. As far as this aspect is concerned, between AD 284–305, the imperial mints are present as follows: Rome (5.5%), Cyzicus (5.4%), Thessalonica (2.7%), Heraclea (52.7%), Nicomedia (4.1%) and Antioch (5.5%) (**Fig. 8**; Găzdac 2010, Table P5). As visible in the previously mentioned statistics, with Diocletian's reign the shift towards a unified monetary system ended by compressing several essential mints that were producing the imperial standards.

## Conclusions

Considering the presented facts, at this point we can mention several possible causes and contexts for the studied phenomenon. In the first place, the relationship between the central and local coinage was of high relevance for the end of the Roman provincial coinage. The periods when the central monetary system was suffering important changes and evolutions are the time frames when the supply of this type of coinage was lacking in the provinces. As a consequence,

Moesia Inferior had the role of being the main supplier for its territory (Dima 2018, 55–57). The context became even more difficult when the silver currency – the antoninianus – had a powerful and fast devaluation (Estiot 2012, 543–544). After 240, the space of Moesia Inferior started to be flooded with the new imperial coin (Van Heesch 2016, 246).

The serious consequences of the new evolutions illustrated the necessity of reforms. During Gallienus' reign began the construction of a new monetary system: new mints that were producing debased coinage and more officinae in Rome (Bowman, Garnsey, Cameron 2007, 158–161). Because of this action, the imperial coins were flooding the space of the whole empire, and the provincial coinage gradually decreased in its production. It could be stated that the end of the Roman provincial coinage in Moesia Inferior was part of a bigger process at the scale of the entire Roman Empire (Touratsoglou 2006, 163–167).

As far as the military dimension is concerned, the raids of the 3rd century AD strongly affected both provinces under discussion. For Moesia Inferior, a crucial moment from a military point of view was in AD 238, when the first Gothic invasion took place. That moment is also illustrated by the high number of coin hoards ending with issues of Gordian III (**Fig. 6**). After 238, the barbarian attacks became more frequent and affected the province even more through the devastation of numerous cities such as Histria and Nikopolis ad Istrum. In these cases, the effects of the attacks could have provoked an earlier end of the local coinage (Preda, Nubar 1973, 68; Isvoranu 2015, 59).

In conclusion, we can state that the end of the Roman provincial coinage in Moesia Inferior was caused by multiple factors (economic, political, and military). This indicates that the raids of the 3rd century AD played an important role, but it was not the only cause for the end of this type of Roman coinage. The process of shifting from a dual monetary system to a unified framework could be considered necessary, and this character was reflected by the numerous difficulties from the studied period. The impossibility of establishing a stable exchange relationship between the imperial silver currency and the bronze one could be mentioned as a possible economic factor for the end of the Roman provincial coinage for the regions under study.

Besides the economic reason, the military and political contexts also contributed to the studied phenomenon. In Moesia Inferior's case, it could be considered that the invasions provoked a faster end of the local minting, but this was not the only cause. The gradual decrease in provincial production was also because of the debasement of the central currency and the gradual expansion of this respective coinage. For this province, the end of the local coinage could be reflected by the high number of coin hoards ending with the issues of Gordian III, Philip the Arab, and Trajan Decius (AD 238–251) because they could signify the end of a respective chapter and the decline of this economic society (Touratsoglou 2006, 163).

Of course, the presented facts are some preliminary possible contexts of the studied phenomena. They will be refined through further research with new data and other possible explanations.

**Bibliography**

Ando, C., 2012. Imperial Rome AD 193–284: The Critical Century. Edinburgh.

Avram, A., 1998. Review of Leszek Mrozewicz and Kazimierz Ilski (eds.), Prosopographica, 1993, in: SCIVA 49, 1998, 305–307.

Boteva, D., 1996. The South Border of Lower Moesia from Hadrian to Septimius Severus, in: Petar Petrović (ed.), Roman Limes on Middle and Lower Danube (= Cahier des Portes de Fer, Monographies 2). Belgrade, 1996, 173–176.

Boteva, D., 1998. On the Way to Tetrarchy: The Role of the Lower Danubian Limes for the Roman Defense System – AD 193–217/218, in: Studia Danubiana, Pars Romaniae Series Symposia I: The Roman Frontier at the Lower Danube 4th–6th centuries – The Second International Symposium: Murighiol/Halmyris, 18–24 August 1996, 77–80.

Boteva, D., 2010. Roman Emperors Visiting the Danubian Province of Moesia Inferior: July 193–February 211, in: Zerbini, Livio (Ed.), Roma e le province del Danubio: Atti del I Convegno

Internazionale Ferrara – Cento, 15–17 Ottobre 2009, Rubbetino, 231–248.

Bottez, V., Talmațchi, G., 2021. New Masters – New Rules. The Beginning of the Roman Imperial Cult in Istros, in: Tsetskhladze, R., Avram, Alexandru, Hargrave, James (eds.), The Greeks and Romans in the Black Sea and the Importance of the Pontic Region for the Graeco-Roman World (7th century BC–5th Century AD): 20 Years On (1997–2017). Proceedings of the Sixth International Congress on Black Sea Antiquities (Constanţa – 18–22 September 2017). Archaeopress Archaeology, Oxford, 488–492.

Bowman, A. K., Garnsey, P., Cameron, A. (eds.) 2007. The Cambridge Ancient History, Second Edition. Volume XII: The Crisis of Empire AD 193–337. Cambridge.

Corbier, M., 2007. Coinage and Taxation: The State's Point of View, AD 193–337, in: Bowman A. K., Peter G., Averil C. (eds.), The Cambridge Ancient History, Second Edition, Volume XII: The Crisis of Empire AD 193–337. Cambridge: Cambridge University Press, 327–392.

Dima, M., 2018. Monede de bronz histriene și de tip histrian descoperite în nord-vestul Mării Negre (sec. IV a.Chr – III p.Chr.), in: Lucian M., Ciprian-Dorin N., Gabriel M. T. (eds.), Studia Numismatica et Archaeologica. In honorem magistri Virgilii Mihailescu-Bîrliba oblata. București: Editura Academiei Române, Piatra-Neamț: Editura Constantin Matasă, 51–85.

Dima, M., 2020. Au fost emise monede la Tomis în timpul domniei împăratului Augustus? / Did Tomis strike coins during Augustus' reign?. Revista de Cercetări Arheologice și Numismatice: RCAN, VI, 2020, 368–380.

Duch, M., 2017. Economic Role of the Roman Army in the Province of Moesia Inferior. Gniezno.

Estiot, S., 2012. The Later Third Century, in: William E. Metcalf (ed.), The Oxford Handbook of Greek and Roman Coinage. Oxford University Press, New York, 538–561.

Freeman, P.W.M., Bennett, J., Fiema, Z.T., Hoffmann, B., 2016. Mints and the Roman Army from Augustus to Diocletian, in: Johan Van Heesch (ed.), Studies in Roman Coinage. Editura Istros, București-Brăila, 241–53.

Găzdac, C., 2004. Center and Periphery: The Roman Monetary Policy Regarding the Lower Danube Provinces at the Mid-3rd Century AD, in: Gaiu, C., Bodale, H. (eds.), Centru și periferie: Lucrările colocviului national, Bistrița 23–25 aprilie 2004, 71–76.

Găzdac C., Alfoldy-Găzdac, Á., 2008. The Management of a Monetary Crisis? The 'P M S COL VIM' and 'PROVINCIA DACIA' Coinages in the Roman Monetary Policy of the 3rd Century AD. Numismatische Zeitschrift, 116/117, 116–153.

Găzdac, C., 2010. Monetary Circulation in Dacia and the Provinces from the Middle and Lower Danube from Trajan to Constantine I (AD 106–337). Cluj-Napoca.

Grozdanova, L., 2019/2024. Римските императори срещу готите на Книва: политическа митология, исторически документи и възстановима събитийност. Sofia.

Howgego, Cristopher, Heuchert, Volker, Burnett, Andrew (eds.) 2005. Coinage and Identity in the Roman Provinces. Oxford.

Isvoranu, Th., 2015. Istros and Tomis During the Scythian War: Numismatic Evidence, in: Boroneanț, Adina, Popescu, Anca Diana (eds.), What if: Administration and Politics in the Lands of Romania. Academia Română, Centrul de Studii Transilvane, Cluj-Napoca, 51–69.

Matei-Popescu, F., 2010. The Roman Army in Moesia Inferior. Bucharest.

Metcalf, W. E. (ed.) 2012. The Oxford Handbook of Greek and Roman Coinage. Oxford.

Pick, B., Regling, K., 1910.Die Antiken Münzen von Dacien und Moesien: Band I.2.1: Odessos and Tomis. Berlin

Preda, N., 1973. Histria III: Descoperirile monetare 1914–1970. Bucharest.

RPC I: Burnett, A. M, Amandry, M, Ripollès, P. P., Roman Provincial Coinage. Vol.1, From the death of Caesar to the death of Vitellius (44 BC-AD 69), 1992, London

Sergeyev, I., 1999. Римская империя в III веке нашей эры. Проблемы социально-политической истории. Kharkiv Maidan.

Talmaţchi, G., 2011. Monetăriile oraşelor vest-pontice Histria, Callatis şi Tomis în epoca autonomă - Iconografie, Legendă, Metrologie, Cronologie și Contramarcare. Cluj-Napoca.

Touratsoglou, I.P., 2006. Greece and the Balkans before the End of Antiquity. (An Approach to the History and Economics in an Age of Crisis and Mutation). Athens.

Varbanov, I., 2005. Greek Imperial Coins. Vol. I. Dacia, Moesia Superior, Moesia Inferior. Bourgas.

Weiss, P., 2005. The Cities and Their Money, in: Howgego, C., Heuchert, V., Burnett, A. (eds.), Coinage and Identity in the Roman Provinces. Oxford University Press, New York, 57–69.

# WONDERCOINS Project: An Online Platform for the Investigation of Ancient Monetary Finds from the Iberian Peninsula and North Africa

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**Abstract:** The WONDERCOINS project (TED2021-131704A-I00 / PY20_01295) arises for the launch of a platform for research and dissemination of ancient monetary finds recovered in the south of the Iberian Peninsula and north of Morocco. With a chronological orientation between the fourth centuries BC and sixth AD, the platform aims to fill a gap in current numismatic research in Portugal, Morocco, and Spain, where there is no such tool. In order to do this, the Dédalo digital database manager is used, an application installed by multiple numismatists throughout Europe. Our approach will be oriented mainly to conserving and disseminating the archaeological contexts of the monetary finds, whether individual or as a whole. In addition, it will offer the possibility of making online maps to analyse monetary circulation and has statistical tools for the analytical dissemination of the data.

**Keywords:** Antiquity, Hispania, Mauretania, Digitalisation, Coin finds, Database.

BulgNJ

The name WONDERCOINS stands for Wide Online Numismatic Data Environment and Recognition of Coins (**Fig. 1**). These are several[1] projects generously financed by European funds

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The publication is part of the action "Corpus nummorum mauretaniaeque online" CNS2022-135815,

that were born with the vocation of solving a series of perceptible problems in the research, conservation, and protection of archaeological heritage, especially numismatics (https://www.wondercoins.es/)

**Fig. 1.** Visual identity of the WONDERCOINS projects. ©Elena Moreno Pulido. [www.wondercoins.es].

To begin with, the management of the huge quantity of numismatic information is complicated to handle if it is not through specific databases that allow ordering, analysing, and fluently inventorying said material.

In addition, the volume of numismatic information results in a second serious problem: not all coins can be published in a traditional way on paper, so much of the heritage and archaeological information is unpublished and unattainable, impossible to be shared for the open advancement of knowledge. This is due to the disconnection of information from Spanish, Portuguese, and Moroccan numismatic findings with digital initiatives, which do allow for the massive publication of data openly and online.

Additionally, it is necessary to establish a standardised methodology of digital management of contextual archaeological information of numismatic findings.

## State of the art. Coin finds digitization in Spain

There are many already existing or developing digital tools on the current international scene regarding the research and protection of numismatic and archaeological heritage, designed to facilitate its analysis, management, preservation, and dissemination through database projects and showing their contents on the Internet (Arévalo, Moreno 2018).

Coins are particularly suitable for their standardised inclusion in databases since they are mass-produced items which possess a relatively standard set of descriptive data. They have been the subject of interest and systematisation since the time of the first antiquarians in the 16th century. As a result, this field has experienced significant progress, and numismatic projects are seen as flagships regarding the application of this computer software in the humanities, even

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more so when it allows to connect contents to other systems through Linked Open Data.

For example, the Staatliche Museen in Berlin have only a reduced number of online numismatic records (3000–4000), but its catalogue is user-friendly, the records are excellent, and the coins are optimally photographed. Other institutions such as the Hermitage, the Smithsonian, the Fitzwilliam in Cambridge, the Yale University Art Museum, or the Bibliothèque Nationale de France (BNF via *Gallica*) are making their own online catalogues, which are now available to Internet users. Also noteworthy is the work done by the Europeana Digital Service Infrastructures (DSI) from the European Commission, linking more than 50 million cultural heritage elements from the main European museums and galleries, ranging from books and paintings to 3D objects and audio-visual material and joining more than 3500 cultural institutions throughout Europe. All of this is clear proof of the possibilities and applicability of these databases for research and shows this huge social impact in the digital culture era.

At present, the DARIAH (Digital Research Infrastructure for the Arts and Humanities) network integrates research and digital arts and humanities activities all over Europe, enabling transnational and interdisciplinary approaches. It has the support of 18 member countries and some cooperating partners. However, Spain does not belong to either of these two groups yet.

In the Spanish scene, the *Guía Digital del Patrimonio Cultural de Andalucía* ("Digital Guide of Andalusian Cultural Heritage") from IAPH (*Instituto Andaluz del Patrimonio Histórico* – "Andalusian Historical Heritage Institute") is an initiative promoted by the Andalusian regional government which supports the promotion of movable and immovable heritage and its added value through the ARQUEOS visualiser. However, it only displays thirteen search results for *moneda* (coin), with solely one of them entirely devoted to Antiquity.

Just a few Spanish museum collections are available through the CER.es website, the *Red Digital de Colecciones de Museos de España* ("Digital Network of Spanish Museum Collections"), which records contents generated from DOMUS (an integrated system for museum documentation and management). Developed by the Ministry of Culture and Sports, it is currently used by 195 museums and integrated into Europeana. Unfortunately, this resource does not use Linked Open Data, and its database, interface, and information search methods do not meet the current standards and regulations applied by far-reaching international initiatives.

As we have already seen, the proposals to digitise numismatic heritage have been improved over the years and have reached an apogee of great activity. However, it must be said that they were mainly developed within their own museum and collection contexts, excluding archaeological context-related aspects of the numismatic findings. Adding to this, these data have not been properly treated yet — not even standardised nor linked to other databases of archaeological materials.

The University of Barcelona is the sole Spanish contributor which provided the project with its database of epigraphic documents, so this European infrastructure cannot be used to visualise other geolocated archaeological objects in our country. Regarding CSIC's IDEArq (Archaeological Research Spatial Data Infrastructure) for the online publication of repertoires of georeferenced archaeological information, it offers access to data from about 1900 archaeological sites in the Iberian Peninsula through Web Map Services and this online platform. Nevertheless, the data from numismatic findings cannot be visualised since they have not been compiled yet.

In this sense, coin findings from the Hispanic territory must be digitally included, a need already detected years ago (Volk 1984; Mora and Arévalo 2009; Ripollés, Gozalbes 2016; Arévalo, Moreno 2018), which would enable Spain to meet the current international standards in research and promotion of numismatic heritage.

## WONDERCOINS Objectives

To try to solve these problems we have managed to establish a powerful interdisciplinary team from several Spanish and Portuguese universities and enterprises. The funding of these projects has been obtained through the research plan of the *Junta de Andalucía*, the Campus of International Excellence of the Sea, the *Casa de Velázquez*, the call for the Digital and Ecological

Transition and the call for Research Consolidation – the latter two of the Ministry of Science and Innovation of Spain and in the lines marked by the Recovery and Resilience funds of Europe.

Therefore, the main mission of these projects is to improve conservation and research on coinage in Antiquity. To this end, the design and implementation of a digital platform with services and features that would allow the consultation and dissemination of numismatic material was proposed, in addition to being strongly prepared for research work.

This platform would serve to register in the database unpublished or published numismatic findings that had not yet been inventoried, digitised, georeferenced, and disseminated online.

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## Methodology. Collaborating through Dédalo software for coin finds registration

WONDERCOINS projects could not be carried out without a powerful, versatile, and constantly evolving database management software system.

In order to free archaeological researchers specialised in numismatics from the problem of dealing with the underlying technological complexity related to computing applied to this domain of heritage, our projects are supported and deployed by the free and open-source software named *Dédalo* that is developed by the Spanish company RENDER S.L., located in Valencia.

As can be read on the Dédalo website, the idea behind its creation is to face a historical problem in the management of cultural and memory archives. For various economic, political, and logistical reasons, no company or organisation is thinking of a global free and open solution for creating and sharing cultural archives. Each institution is creating its own tailor-made solutions, which are usually not re-usable in other institutions and are only in very few cases free to use, so modest institutions or researchers do not have access to them.

The Dédalo developers think that the importance of our past and our cultural legacy and memory is so great that it should not be left only in the hands of private companies with exclusively economic interests. It is everyone's job to preserve and spread it, both for current and future generations.

There is much more information about this initiative on their website (https://dedalo.dev).

It is important to emphasise the philosophy followed by the WONDERCOINS projects, which from the very first moment wanted to integrate into the current standards set by Nomisma for numismatic content websites. Moreover, Dédalo is configured to output the contents registered on its platform in the RDF format that Nomisma needs to view its contents on its websites.

Dédalo can even automatically import the RDF corresponding to Nomisma's typological catalogues, so that we have a typological database to easily catalogue our coins through Nomisma's standards.

All these efforts are focused on trying to homogenise numismatic findings with an origin in the same platform through collaboration between interrelated projects.

Concretely, the WONDERCOINS projects offer any interested researcher the free use of Dédalo's software, since it is free and open source. It allows the advancement in open science research, since it is based on linked open data. It is a collaborative tool based on wiki principles and in the solid belief that science should advance thanks to multi and interdisciplinary international collaboration.

In addition, Dédalo allows for independence in the investigation of any interested party, since it has functionalities that allow the visualisation of the data to be restricted to certain profiles and users. This research independence is reaffirmed thanks to the fact that Dédalo offers recognition of authorship of the files or contents published in the database and in the chosen output web platform. Moreover, the program allows the user to publish on multiple and different websites, choosing which material will be published on each platform. These websites are also provided

with an ISBN, making them recognised publications for all purposes valid for a scientific and academic career.

If in addition to inventorying and working with the coins in the database, a researcher would like to see them online, he or she can choose to create their own website and connect it to the database. For this, we will also offer a template for free use that is customisable and facilitates the direct connection with the platform.

However, it is also possible to work collaboratively on a single website that grows thanks to the general work of all researchers interested in digitising and publishing numismatic findings online in an archaeological context.

As mentioned, the contents are managed with Dédalo, an opensource system for research and publishing based on web standards, with powerful capabilities for collaborative projects. The continuous development of this management system has allowed it to reach a high standard, making it possible to create large digital catalogues with filters that allow for dynamic and personalised queries. The best example of Dédalo's possibilities about numismatics at present day is https://monedaiberica.org/ (Ripollès Alegre, Gozalbes Fernández de Palencia 2016).

The WONDERCOINS projects' budget made it possible to acquire the necessary server infrastructures to install this tool in the domain https://wondercoins.uca.es, which can currently be accessed by any researcher who is granted a username and password to start working privately, individually, or collaboratively on said platform that is physically located in the computing infrastructure installations of the University of Cádiz. The tasks of configuring these servers and software installation fell to Mr. Felipe Bergua Toledo, a signatory of this article.

While there are many advantages to using Dédalo, it should mainly be emphasised here that it is free software. Dédalo is a web application system that was born in 1998 for the management and research of cultural heritage. In 2016, another new ontology was created for the management and publication of numismatic catalogues, a data model to which the name Numisdata was given. It allows for collaborative work because it is multi-user – that is, a large number of users can be working in the same database at the same time, registering new files or modifying others without data inconsistency. On the other hand, it should be noted that it has a friendly user interface (**Fig. 2**) and is very easy to work with, which greatly facilitates the labour and the digital challenge we face.

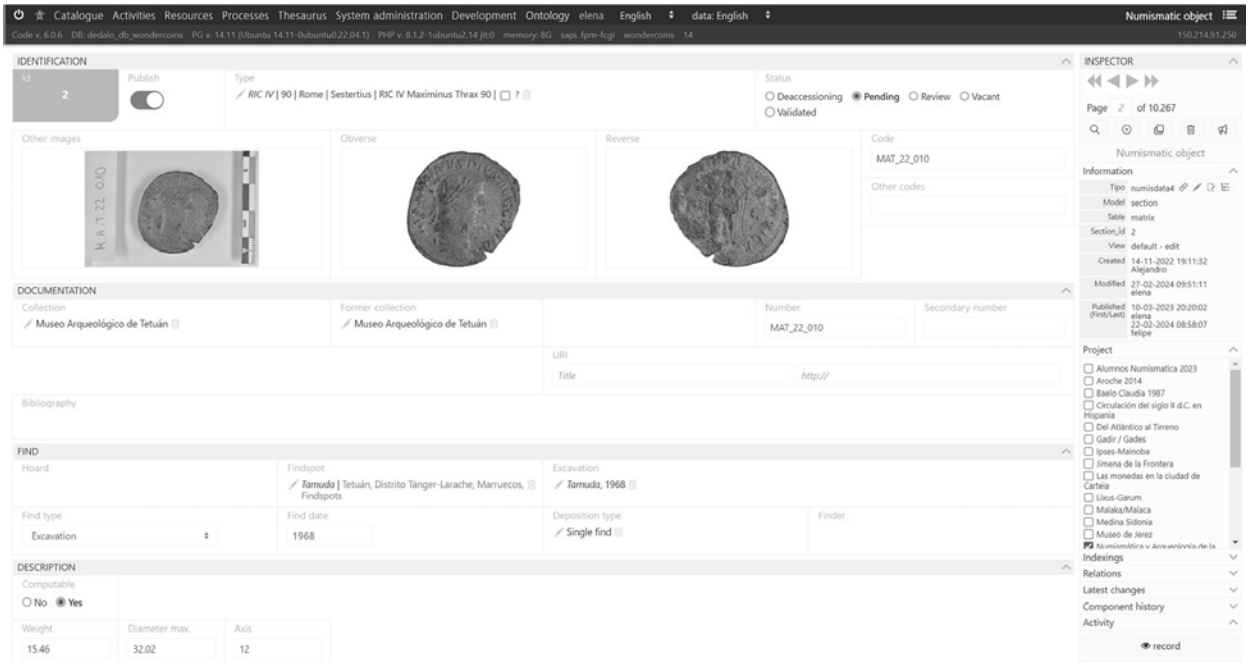


**Fig. 2.** Sample of the registering of a numismatic object in Dédalo (coin conserved at the Archaeological Museum of Tetouan). [www.wondercoins.uca.es].

## Data recorded by WONDERCOINS projects

Our projects for recording numismatic data have two different parts: the Dédalo management system and the public website. Like two sides of a coin, Dédalo is the application that allows one to organise, to select, and to publish the contents on the website. In our case, we have a beta platform of the website under development, whose final version will be available soon.

The ultimate goal of this initiative is, over time, to collaboratively build an online platform that shows in a unified way the numismatic findings with a more or less uncertain provenance and without temporal or geographical limits.

This is not a goal that has arisen spontaneously or without strong foundations. Prior to this initiative of homogenisation in a single webpage, Dédalo has been used monographically to record findings published in other Numisdata websites. This is the case of Numisdata Sardinia, an initiative of Pere Pau Ripollés and Manuel Gozalbes for the registration of coins found in an archaeological context on the island (https://numisdata.org/sardinia/web/) or the Carthaginian Coin Finds initiative of Iván Fumadó Ortega for the registration of already published numismatic finds found in Carthage (https://carthaginiancoinfinds.numisdata.org/web/).

We are currently in the process of homogenising these initiatives on the same Internet domain with findings from Hispania, Sardinia, Carthage, and Mauretania Tingitana. We are especially interested in recording where each coin was found in a hierarchical way. For example, one Ae3 of Constantine was found in an excavation in Tamuda (Tetouan, Morocco) in the Roman baths, in one of the canalisations of these baths, and in a specific stratigraphic unit. Following this hierarchy of findings allows us to study the coin in context. In the funerary case (**Fig. 3**), we can record its specific position in the tomb, its relationship with the body, or with the trousseau (Arévalo, Moreno 2016).

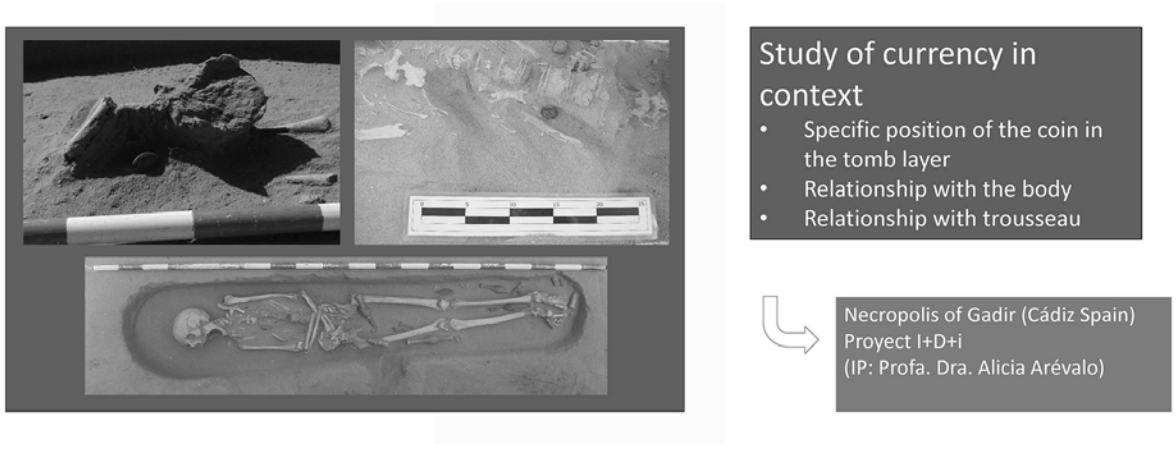


**Fig. 3.** Registering of the coins in their archaeological context. Coins in funerary context (Arévalo and Moreno, 2016).

Hierarchy (Fig. 4) can be complicated or simplified as required, depending on the needs of the excavation or its periodisation.

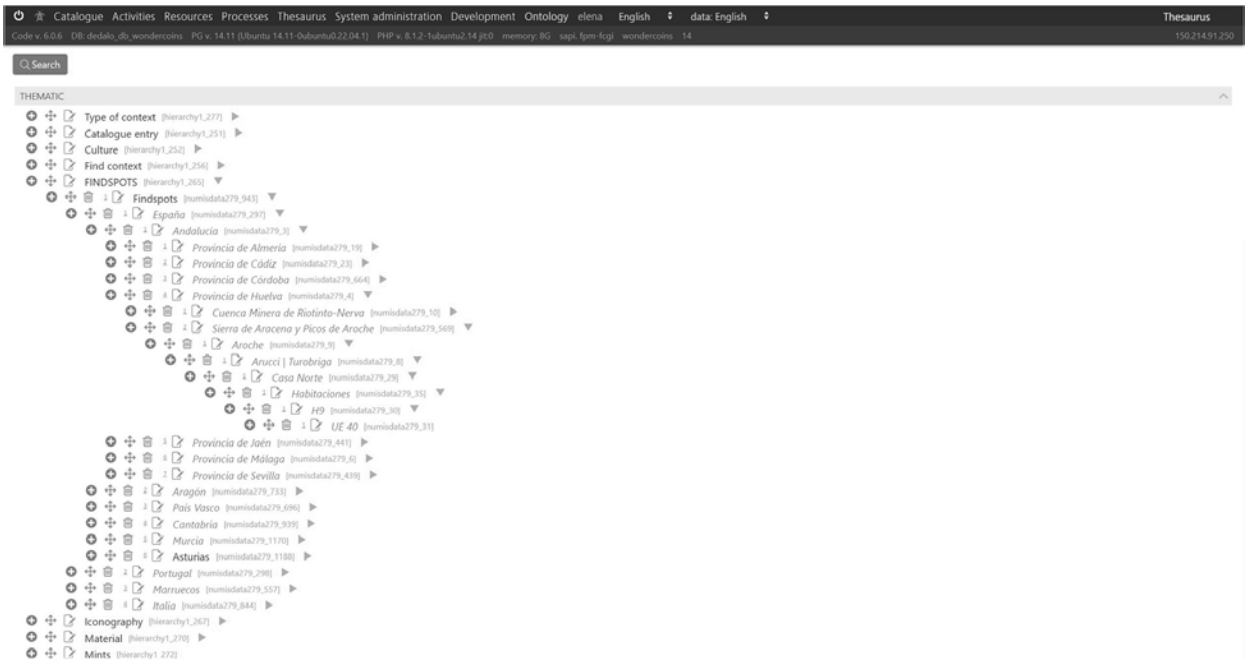


**Fig. 4.** Hierarchical organisation of the findspots where the coins were found in Dédalo. [www.wondercoins.uca.es].

We can thus register examples of coins in a necropolis with multiple positions, leaving all of them organised and filterable, facilitating their joint analysis.

Thanks to Dédalo, we can filter and retrieve each monetary record, whether we search for the higher hierarchical levels (parents) or lower ones (children). As an example, we have recorded more than one thousand coins in different *cetariae* contexts (**Fig. 5**).

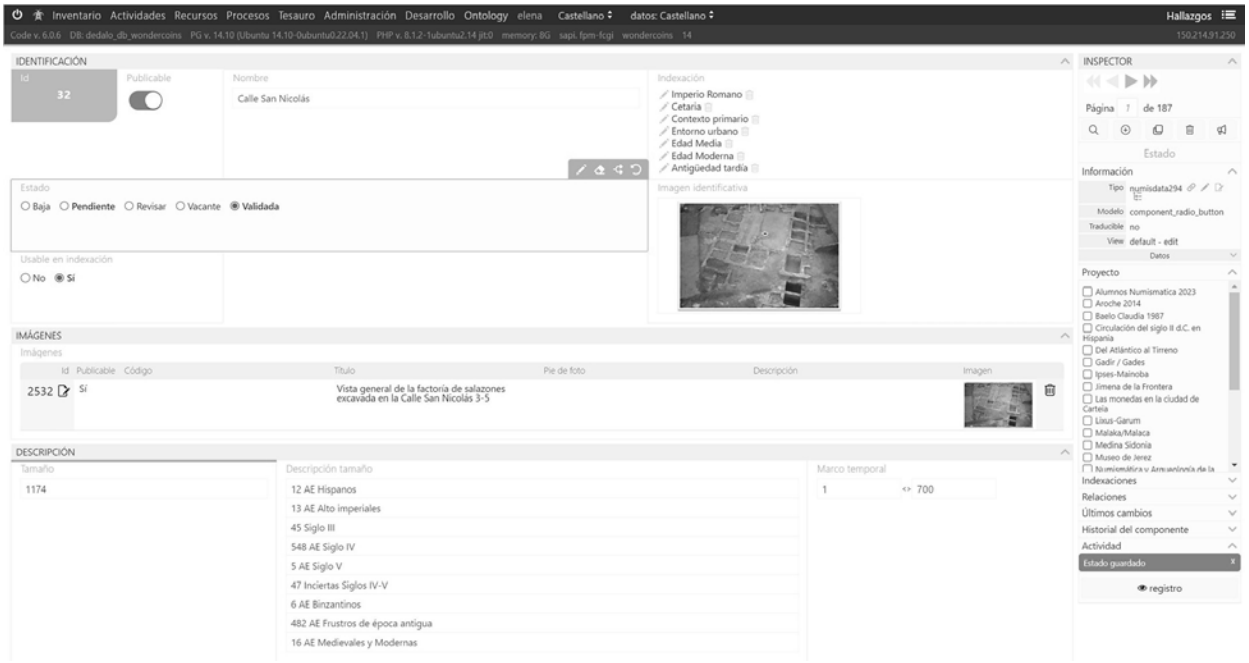


**Fig. 5.** Registering findspots in Dédalo. Example of cetariae contexts. Identification and indexation of the context. [www.wondercoins.uca.es].

Of course, it is necessary to add the bibliographic references of the studies already published, so Dédalo makes this work possible in an excellent way and also allows integration with the Zenon system (**Fig. 6**) from the DAINST (*Deutsches Archäologisches Insitut*/German Archaeological Institute).

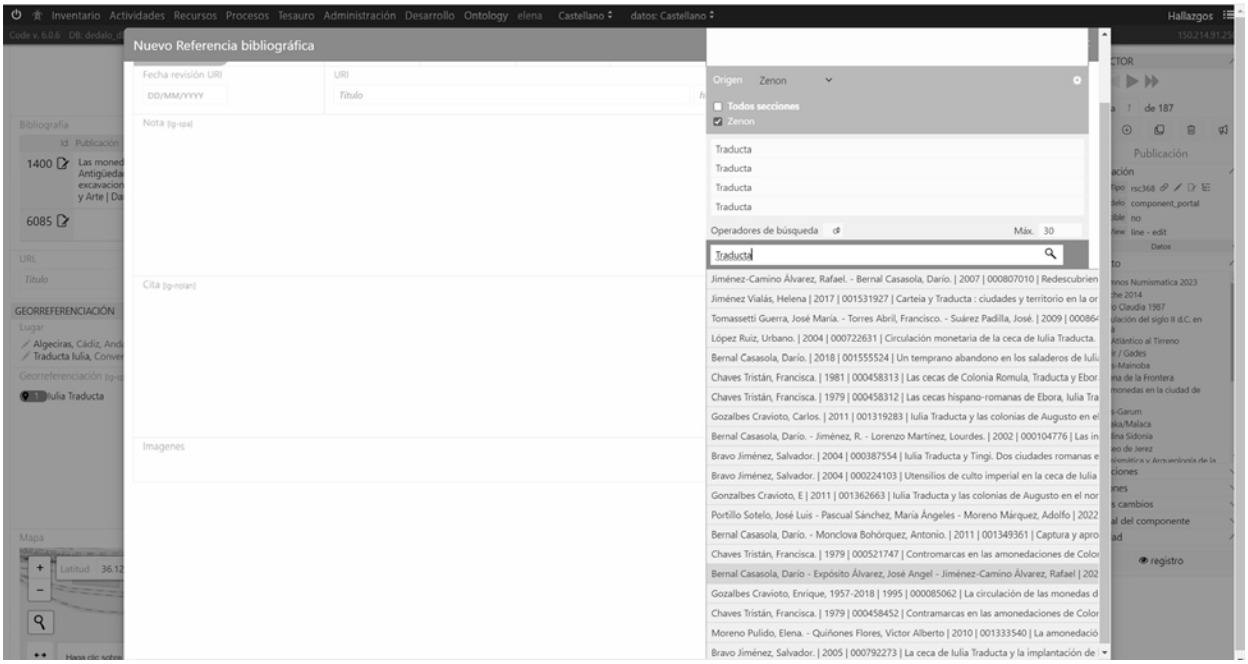


**Fig. 6.** Registering bibliography and public information about the context in the system. [www.wondercoins.uca.es].

In order to accomplish the named objectives, we have the collaboration of different museums and archaeological interventions of Spain, starting in Andalusia, where we are cooperating firstly by recording and cataloguing the coins. We are collaborating with the University of Cádiz professors Alicia Arévalo and Darío Bernal; assistant professors Macarena Lara and José Ángel Expósito; and Titular Professor Manuel Palomo, as well as various students also from the University of Cádiz; Professor Bartolomé Mora from the University of Málaga; Assistant Professor Ruth Pliego from the University of Seville; Titular Professor Javier Bermejo and Assistant Professor Lucía Fernández from the University of Huelva; Ph.D. Nieves Medina from the Archaeological Museum of Aroche; Ph.D. Manuel Gozalbes from the *Museo de Prehistoria de Valencia;* Associate Professor Ivan Fumadó and former Professor Père Pau Ripollès, from the University of Valencia. We are all together, the IT crew and the team of archaeologists, still working together to keep recording data in museums, archaeological sites, and bibliography references at the moment of writing of the present pages.

Among others, we can enumerate the introduction of this data in our Dédalo system:

- *Museo Provincial de Cádiz (*Cádiz*),* where we have recorded more than 4350 coins (Arévalo, 2006).

- *Museo Arqueológico de Jerez (*Cádiz*)*, registering 432 coins.

- *Museo Arqueológico de Medina Sidonia (*Cádiz*)*, recording 250 coins.

- *Museo Arqueológico de Chiclana de la Frontera (*Cádiz*)*, recording 93 coins (Gómez García, 2020).

- *Museo Arqueológico de Riotinto (*Huelva*)*, recording 1200 coins (Arévalo and Moreno 2021, 2024).

- *Museo Archeológico de Aroche (*Huelva*)*, recording 378 coins (Medina, Campos, Bermejo, 2016).

- The archaeological site of Carteia, with the recording of the coins still in progress, has uncovered more than 400 coins (Arévalo and García, forthcoming).

- The archaeological site of Baelo Claudia, still recording the coins from the old excavations of the site in 20$^{th}$ century through the bibliographical references (Bost et alii, 1987) and the recent excavations of the University of Cádiz (Arévalo and Moreno, forthcoming).

- The archaeological site of Torre de Benagalbón (Málaga), 27 coins (Mora and Pérez, 2017).
- The archaeological intervention in C/San Nicolás (Algeciras, Cádiz), recording 1152 coins (Arévalo and Mora 2018).
- Hoard of Linares (Jaén), recording 130 coins.
- Hoard of Plaza España (Écija, Sevilla), 1305 coins (Chaves, García, López, Pliego, 2009).
- Association *Tanit, Jimena de la Frontera (*Cádiz), recording 39 coins.
- Bibliographical information of the doctoral thesis from Laura Arias, coins from the second century AD found in Hispania (Arias Ferrer, 2007), yet recording of the coins in progress, more than 497 coins already in the system.

As for the coins found in Portugal, we have already worked with Celso Candeias from the archaeological site of Balsa, Vera Freitas from the Museum of Portimao, Francisco Pacheco from the Museum of Beja, María Luisa Guerreiro from the *Museu Nacional de Arqueologia*, Professor Carlos Fabiao and Professor Ana Margarida Arruda from the University of Lisboa, and Professor Rui Centeno from the University of Oporto. Thanks to these collaborations, we have already registered the coins of these museums and archaeological interventions:

- The archaeological site of Vaiamonte and its surroundings (Portugal), 285 coins (Fabiao, 1998).
- *Museu Nacional de Arqueologia*, 977 coins (Moreno and Arévalo, 2021a).
- *Museu de Portimão*, 262 coins (Sousa, 2013a, 2013b).
- *Museu Municipal de Faro*, 129 coins (Moreno and Arévalo, 2021).
- *Campo Arqueológico de Tavira*, just one interesting coin (Moreno and Arévalo, 2021a).
- *Camara Municipal de Tavira*, 105 coins from the bibliography (Viegas, 2005; Moreno and Arévalo, 2021a).
- *Museu Regional de Beja*, 685 coins (Viana, 1942; Hipolito 1962; Faria, 1992; Moreno and Arévalo, 2021a).
- *Museu de Santiago Cacem*, 87 coins (Pereira, 1993).
- *Centro Explicativo de Sao Bras de Alportel*, seven coins.
- The archaeological site of Milreu, 86 coins (Conejo, 2019).
- *Campo Arqueológico de Mértola*, 144 coins (Moreno and Arévalo, 2021a, 2021b)
- Archaeological interventions in *Horta da Misericordia* (Faro), 50 coins (Valente, 2016; Moreno and Arévalo, 2021a).
- Private collections from Algarve, 731 coins (Arévalo and Moreno, 2017; Moreno and Arévalo, 2021a).
- Old references of coin findings in Algarve from the bibliography, 737 coins (for detailed references see Moreno and Arévalo, 2021a).

In order to record the coins found in North of Morocco, we already have the collaboration of the *Foundation Nationale des Musées de Maroc,* and we worked closely in research projects with the professors Darío Bernal Casasola from the University of Cádiz and Laurent Callegarin from the University of Pau and the Pays of the Aldour. We are nowadays working in registering data from:

- Archaeological interventions in Lixus (Morocco), recording of the coins in progress.
- Archaeological Museum of Tetouan (Morocco), recording of the coins in progress, but more than 3000 specimens (Moreno and Arévalo, forthcoming).
- Archaeological interventions in Tamuda (Morocco), recording of the coins in progress,

more than 100 specimens.

Also, our system hosts coin finds from Italy, thanks to the work of Gozalbes and Ripollès:

- Archaeological sites in Sardinia (Italy), recording 396 coins already registered in https://numisdata.org/sardinia/web/

Moreover, at present we have already incorporated into Dédalo's database more than ten thousand coins, more than a thousand ancient mints, almost nineteen thousand coin types, and one thousand coin find spots.

Complementary to this data loaded in our Dédalo installation, we have incorporated more than five thousand bibliographic references as well as more than three hundred publications.

### The development of a new georeferencing tool for Dédalo

But what happens when we do not have precise information about the place of discovery of the coin? In many cases we have very vague information about the context, and the coin cannot be specified at an exact location point. The key is the organisation in hierarchy for the registration of the places of discovery and the use of a thesaurus of interpretation of the contexts that can index the functionality of each find in relation to each excavation. In this way, a typical finding sheet in Dédalo uses tags linked to the thesaurus to index the finding in terms of its interpretation as well as its periodisation or culture. You can register as many media files as you need, such as planimetries, photographs, orthophotos and much more. Also, a description of the site can be included in text mode.

The problem of uncertainty can be narrowed relatively easily, as geographers have spent years working with different scales that are bounded by the number of digits of the coordinates. Combining the precision of coordinate degrees is the key to reliable spatial analysis. In this way, we can combine in the same database the precise coordinates for some georeferenced findings with other findings of which we only know the toponymy.

Establishing a mathematical value of precision of the rest of the finds is made easy by dividing the known extension of the place of discovery. In this way, we can work with geographical uncertainty, establishing numerical values for known findings in nations, regions, cultural areas, etc. Logically, the smaller the extent of the area where we know the coin was found, the greater the accuracy of our spatial analysis. This analysis can be performed using automatic calculations based on data easily stored in the database. A georeferencing of the site is included in relation to its current and historical toponymy and the coordinates of the find when available. Points, polygons, or lines can be used to delimit the place of discovery.

WONDERCOINS projects are also improving Dédalo software in a collaborative way. We have hired the services of Manuel Jesús Dávila González through the Spanish company IBERMAD. Mr. Dávila is an expert in georeferencing and web design development and has implemented GIS improvements in the map visualisation part of the Dédalo application (**Fig. 7**). These new enhancements are designed so that all possible end users of the software beyond the WONDERCOINS projects can take advantage of the benefits these new functionalities will bring to the community.

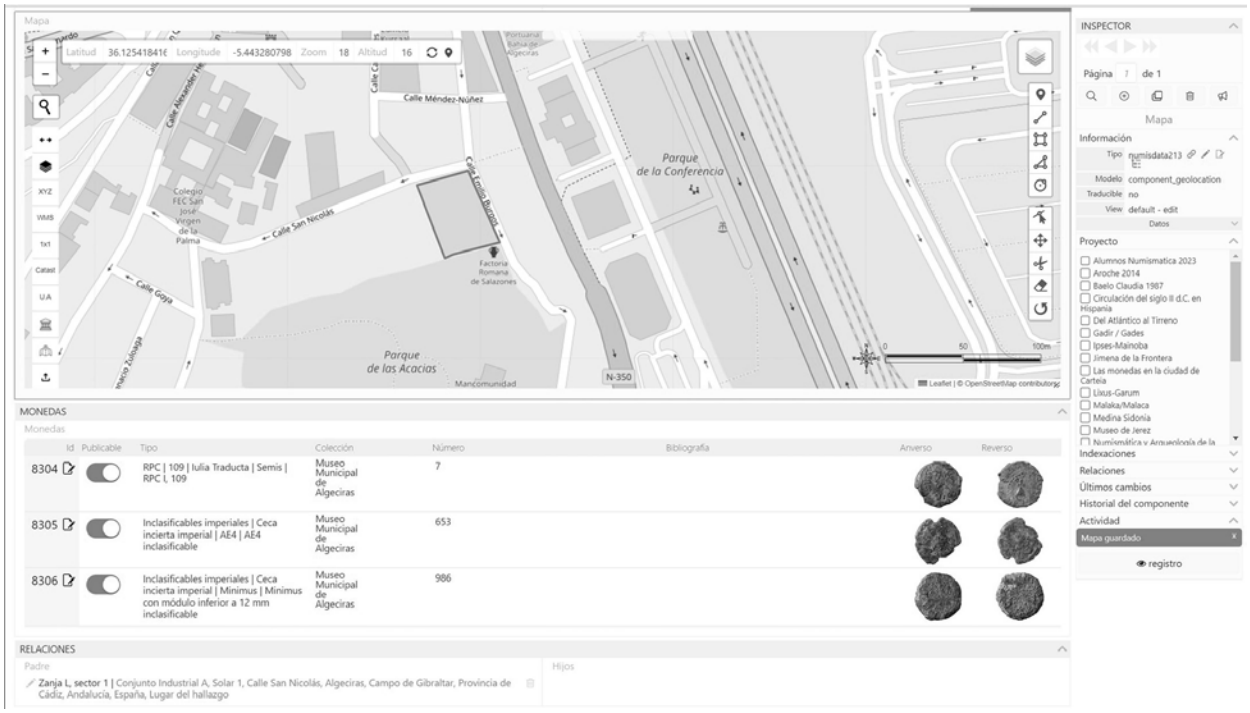


**Fig. 7.** Georeferentiation of the findspot and previsualisation of the several coins associated with the site. [www.wondercoins.uca.es].

## Future plans and reflexions

We will quickly end by citing plans for the next two years. First, we aim to offer collaborations with other institutions, museums, universities, sites, and archaeologists interested, and we will try to prepare a solid candidacy for a coordinated international research project in this regard. Also, we freely offer collaboration in our project to whomever wants to participate; all they need to do is contact us.

In line with the successful Iberian initiative developed by Ripollés and Gozalbes https://monedaiberica.org/, we announce that we are embarking on the elaboration of the typological corpus of Mauretanian coins.

## Bibliography

Arévalo González, A., 2006, La moneda antigua del Museo de Cádiz. Valoración de un reciente proyecto de investigación, Actas del I Seminario Hispano-Marroquí de Especialización en Arqueología, 2006, pp. 297–308.

Arévalo González, A., García Cobeña, A.R. Forthcoming. Consideraciones sobre la circulación monetaria púnica en Carteia (San Roque, Cádiz). Antiguos y nuevos testimonios, in: X Congreso Internacional de estudios fenicios y púnicos (Ibiza).

Arévalo González, A. and Mora Serrano, B., 2018. Las monedas de las cetariae de Tradvcta. Un ejemplo de circulación monetaria en el estrecho de Gibraltar en la Antigüedad Tardía', in: Bernal Casasola, D., Jiménez-Camino Álvarez, R. Las cetariae de Ivlia Tradvcta: resultado de las excavaciones arqueológicas en la calle San Nicolás de Algeciras (2001-2006), Cádiz, pp. 655–718.

Arévalo González, A., Moreno Pulido, E. 2016. La moneda en las necrópolis de Gadir/Gades, in: Arévalo González, A. (ed.), Moneda para el más allá. Uso y significado de la moneda en

las necrópolis tardopúnicas y romanas de Ebusus, Gades y Malaca: Universidad de Cádiz-Universidad de Málaga, Cádiz, 73–189.

Arévalo González, A., Moreno Pulido, E. 2017. La moneda y el trasiego portuario. Una mirada desde la costa atlántica del sur de Hispania, in: Campos, J., Bermejo, J. (eds.), Los Puertos Atlánticos Béticos y Lusitanos y su relación comercial con el Mediterráneo, Huelva, pp. 169–206.

Arévalo González, A., Moreno Pulido, E., 2018. Panorama numismático de la Ulterior-Bética. Una contribución para el CVB (I), in: Campos Carrasco, J., Bermejo Meléndez, J. (eds.), Ciudades Romanas de la Provincia Bética. Corpus Vrbivm Baeticarum: Conventus Hispalensis et Astigitanus. CVB I, Onoba Monografías, Huelva, pp. 135-158.

Arévalo González, A., Moreno Pulido, E., 2021. La moneda antigua en Urium. Aprovisionamiento y circulación monetaria en las minas de Riotinto Onoba Monografías, in: Pérez Macías, J.A., Iglesias García, L., Vicus Metallum Uriensis. Un acercamiento a las minas de Riotinto en época romana, Huelva, pp. 153–301.

Arévalo González, A., Moreno Pulido, E., 2024. Los hallazgos monetales procedentes de Riotinto (Huelva) en una pionera base de datos online, in Homenaje a Juan Aurelio Pérez Macías, Huelva, pp. 23–32.

Arévalo González, A., Moreno Pulido, E., forthcoming. Testimonios monetales tardorromanos del noreste del barrio meridional de Baelo Claudia.

Bost, J.P., Chaves, F., Depeyrot, G., Richard, J.C, 1987, Belo IV. Les Monnaies, Publications de la Casa Velázquez, Madrid.

Arias Ferrer, L., 2007. La circulación monetaria en la Hispania del siglo II d.C., Universidad de Alicante. Unpublished doctoral thesis.

Chaves Tristán, F., García Vargas, E., López Ruiz, U., Pliego Vázquez, R., 2009, Estudio del material numismático recuperado en la excavación de la plaza de España de Écija (Sevilla). Fases 1 y 2, Anuario Arqueológico de Andalucía 2004.2, pp. 883–886.

Conejo, N., 2019, Economía monetaria de las áreas rurales de la Lusitania romana, Unpublished doctoral thesis, University of Sevilla.

Fabiao, C., 1998. O mundo indígena e a sua romanização na área céltica do território hoje portugués. Faculdade de Letras da Universidade de Lisboa. Unpublished doctoral thesis.

Faria, A., 1992, Trés tesouros monetários romanos da época republicana, Nvmmvs 2ª Serie XIV/XV.

Gómez García, J., 2020. Aproximación a la circulación de moneda de época antigua en el término municipal de Chiclana de la frontera (Cádiz), Unpublished academic work, University of Cádiz.

Hipolito, M., 1962, Dos tesouros de moedas romanas em Portugal. Em especial de alguns da segunda metade do séc. III d.C., Coimbra.

Medina, N., Campos, J.M., Bermejo, J., 2016, El tesorillo de la Casa Norte de Arucci (Aroche, Huelva), IX Encuentro de Arqueología del Suroeste Peninsular. Unpublished poster.

Mora Serrano, B., Arévalo González, A., 2009. Base de datos sobre hallazgos monetarios en el Conventus Gaditanu', in: Arévalo González, A. (Ed.), XIII Congreso Nacional de Numismática (Cádiz, 22–24 octubre de 2007), FNMT-Universidad de Cádiz, Madrid-Cádiz, pp. 717–730.

Mora Serrano, B., Pérez Plaza, A., 2017. Un nuevo ocultamiento monetario de bronces romano-republicanos y de «Castulo» en el sur de Hispania: Torre de Benagalbón (Málaga). Zephyrvs, 79, pp. 173–195. https://doi.org/10.14201/zephyrus201779173195

Moreno, E., Arévalo, A., 2021a. La moneda como reflejo del movimiento de personas y mercancías en las ciudades portuarias de Myrtilis, Balsa y Ossonoba y sus territoria, in: Campos, J., Bermejo, J. (eds.), Del Atlántico al Tirreno. Puertos hispanos e itálicos, Huelva, 249–330.

Moreno, E., Arévalo, A., 2021b. La moneda en la ciudad portuaria de Myrtilis, XVI Congreso Nacional de Numismática (Barcelona, 28, 29 y 30 de noviembre de 2018), 283–301.

Pereira, I., 1993. Tesoro do Monte do Cavaleiro, Algarve, Acta Numismática 21–23, 303–314.

Ripollès Alegre, P.P., Gozalbes Fernández de Palencia, M., 2016. La numismática de la Antigüedad online. Situación actual y perspectivas de futuro, in: Grañeda, P. (Ed.), XV Congreso Nacional de Numismática (Madrid, 28–30 octubre 2014), Museo arqueológico Nacional, Madrid, 743–752.

Sousa, J., 2013a. Circulação monetária no barlavento algarvio Séc. III a.C. / Cláudio, Portimao.

Sousa, J., 2013b. Circulação monetária na Antiguidade no estuário do rio Arade, Portimao.

Valente, M.P., 2016. Numismas da horta da misericórdia (Faro): catálogo geral, Faro.

Viana, A., 1942. Denarii do Museu Regional de Beja, Arquivo de Beja, vol. XII, fasc. I–V, pp. 169 ss.

Viegas, A., 2005. Moedas de Balsa, Tavira.

Volk, T., 1984. Towards a Numismatic Database: the Spanish Experience. La Numismatica e il Compiuter, Boll. di Numismatica, Suppl. al num. 1, 47–61.

Volk, T., Campo, M., Tarradell-Font, N., 1983. Tesoros monetarios de Hispania antigua: proyecto para un banco de datos e inventario, Nvmisma 180–185, 9–41.

# Coin Finds at Paestum: Contexts of Provenance and Digital Re-use of Documentation

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**Abstract:** The numismatic documentation of Paestum exemplifies a noteworthy case study within a defined monetary framework. The Archaeological Park of Paestum, in collaboration with the University of Salerno, initiated the "DiP_Coins – Digital Paestum Coins" project to enhance the accessibility and comprehensiveness of the numismatic records. Supported by the Foundation for Cultural Heritage, the project integrates the digital catalogue with the Coin Finds Hub - Italy portal. The multi-stage project involves recovering historical documentation, restoring materials, and creating the Paestum Coin Finds platform. The Hera digital catalogue, structured on a web-GIS platform, serves as a pivotal tool, facilitating geo-referencing and in-depth data association. Integration with Nomisma.org network platforms further expands the project's visibility and accessibility. The Hera Catalogue's GIS perspective integrates record-keeping and cartographic interfaces, contributing to the contextual understanding of archaeological finds. The initiative emphasises public archaeology, making archival data accessible and contributing to knowledge and identity-building processes in the field of archaeology. The collaborative and open nature of the project aligns with the broader goal of disseminating scientific research outcomes and fostering knowledge generation in the realm of numismatics.

**Keywords:** Numismatic Heritage, Archaeological Documentation, Digital Catalogue, Coin Finds, Public Archaeology.

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The numismatic documentation relating to Paestum stands as an exemplary case study within the realm of a well-defined monetary framework. This study is particularly noteworthy for its contribution to the formulation of specialised management systems dedicated to the organisation and preservation of numismatic records.[1] The Archaeological Park of Paestum safeguards an impressive array of artefacts derived from excavations conducted within the environs of the ancient town, accompanied by pertinent contextual and archival documentation. Over the course of decades, state authorities and the numismatics chair at the University of Salerno have surveyed the distinctive characteristics of these unearthed relics. Notably, the university has consistently played a pivotal role as a primary collaborator in archaeological and numismatic investiga-

[1] Preliminary results have been presented in Carbone 2022a, 529–538; Carbone in Cantilena, Carbone, Pardini 2023, 135–170; Carbone, Pardini 2024, 31–38.

tions in the Paestum region, perpetuating research endeavours that persist into the present day.[2]

Regarding coin surveys, they have recently witnessed augmentation through the implementation of a pilot initiative known as "DiP_Coins – Digital Paestum Coins". This endeavour has facilitated the experimentation with a model designed for the seamless integration and utilisation of numismatic documentation. It has in parallel given rise to the conceptualisation of a specialised portal for the 'Coin Finds Hub – Italy' project, entitled 'Paestum Coin Finds' (Carbone 2022a, 529–538). This initiative encompasses the enhancement of the Hera digital catalogue (Zuchtriegel et al. 2022),[3] a project endorsed by the Archaeological Park of Paestum and Velia. Additionally, it extends its reach to various international systems configured in accordance with the framework delineated by Nomisma, a preeminent global network dedicated to the description and online dissemination of numismatic data on a broader scale.

## Coin finds at the National Archaeological Museum of Paestum

The culmination of past research endeavours now enables the systematic organisation of an extensive dataset pertaining to coins accumulated since the initiation of systematic surveys in the urban precincts at the inception of the 20th century.

In juxtaposition to the limited number of specimens unearthed during the initial investigations within the walled confines, the Museo di Paestum's medal collection predominantly comprises a substantial assemblage originating from excavations conducted during the Fascist era. These excavations encompassed both the urban expanse and the precincts surrounding the sanctuary of Hera Argiva at Foce Sele.

Significantly, the majority of the coins trace their provenance to the extensive excavations undertaken during the 1960s and 1970s, a period marked by comprehensive research not only within the urban confines but also in the necropolis areas. This prolific phase of exploration has significantly enriched our understanding of the numismatic landscape associated with Paestum.[4] Subsequent excavations, spanning from the following years to the contemporary period and conducted by diverse research teams – including those from France, Germany, the Universities of Naples "L'Orientale" and "Federico II", and notably the University of Salerno – persist in augmenting the corpus of knowledge pertaining to coin discoveries in Paestum.

To delve into specifics, the current repository in Paestum shelters over 8,000 coins, predominantly sourced from the urban expanse, with relatively smaller numbers originating from the necropolis and sanctuaries beyond the city limits – notably, Santa Venera near the walls and the Heraion at Foce Sele. Among these, 5,125 coins have undergone restoration over time, while an additional 3,200 await meticulous cleaning and consolidation.

However, the challenge lies in the comprehensive documentation of these artefacts, as only approximately 2,600 of them boast a meticulously compiled catalogue card adhering to the standards articulated by NU Card 3.00 (Arslan 2004). This underlines the ongoing effort required to ensure a thorough understanding of the local numismatic heritage, while about 1,100 are inventoried only with preliminary documentation.

The information concerning the quantity of coins originating from the Paestum region remains incomplete, primarily for two overarching reasons. Firstly, a significant proportion of coin hoards from Paestum is housed in alternative institutions, having been transferred there prior

[2] For a summary of the numismatic research on Paestum to date, see Ebner 1970, 19–44; Crawford 1973, 47–109; Crawford 1976–77, 151–159; Cantilena, Pellegrino, Satriano 1999, 9–154; Cantilena, Pellegrino, Pantuliano, Satriano 2003, 25–156; Cantilena 2010c, 685–732; Cantilena 2011, 15–28; Carbone 2012, 253–260; Carbone 2014; Carbone, Grimaldi 2014, 92–97; Cantilena, Carbone 2015; Carbone 2017, 443–450; Debernardi, Carbone 2018, 305–314; Cantilena 2020, 407–414; Cantilena 2022, 201–222; Carbone 2022a, 529–538; Carbone 2022b, 223–250; Carbone in Cantilena, Carbone, Pardini 2023, 135–170; Carbone 2025, 91–118.

[3] https://hera.beniculturali.it/catalogo/ [last access 01/03/2024].

[4] For the necropolis see Prisco 1980–81, 23–56; Sestieri 1967, 185; Scafuro 2019, 56, 62–63, 80, 152. On this topic see also Sallusto 1971-72, 57–71.

to the establishment of the museum. A notable example includes a certain modest yet significant silver hoard presently at the Medagliere of the National Archaeological Museum in Naples,[5] and some coins from excavations carried out by the Provincial Authority.[6] Additionally, another contributing factor to the incomplete data lies in the presence of several groups of coins, accompanied by contextual material, awaiting publication. These artefacts are dispersed, with a notable concentration in the Salerno Superintendency, poised for an eventual return to Paestum following the ministry reform concerning the restructuring of responsibilities. Consequently, the tally of coins associated with Paestum is an evolving metric, steadily expanding over the years, and is anticipated to persist in its growth path in the expected future.

Restricting our examination to the quantitative specifics, crucial for obtaining a condensed understanding of the discoveries, it becomes apparent that gold coins are notably scarce (only three specimens[7]); coin finds are generally of single bronzes, apart from some small change hoards (Polosa 2000, 113–117; Carbone 2024a).[8]

Regarding silver coins, there exists a considerable quantity, although it's essential to consider this in light of our examination of coin hoards. Among the approximately 1400 silver coins, nearly 1,000 originate from hoards. Notably, a significant portion — precisely 646 coins, slightly surpassing half of the total silver coins — can be traced back to a specific hoard of coins from the Augustan period. This particular hoard plays a pivotal role in shaping our understanding of Paestum's numismatic history, specifically during the era of Augustus (Cantilena 2000).

Indeed, while there are many individual finds, a significant number of specimens (about 15%) are made in silver (Cantilena 2000; Debernardi, Carbone 2018, 305–314).

Upon examining the comprehensive quantitative data, which is solely a numerical datum, it comes as no surprise that a substantial portion of attestations belongs to the coinage of Poseidonia/Paestum. This mint, exhibiting discernible productivity and sustained continuity, stands out prominently within the examined series (Carbone 2014; Cantilena, Carbone 2015).

Less than half of the base metal coins can be traced back to Greek issues, generally from other cities of Magna Graecia, being mainly bronzes from the nearest centres, including Velia.

As far as Republican coins are concerned, there are less than 1,000 specimens, most of which come from small treasuries: in addition to the Augustan treasure mentioned above, there are two Victorian hoards from the so-called Ara Basilica. As for the Republican bronze currency, it seems to be very scarce among the circulating currency, a fact that has already been linked to the abundant production of Paestum bronzes between the 2nd and 1st centuries BC (Carbone 2014; Carbone 2017, 443–450).

The number of coins from later series increases significantly, with a good concentration from the mid-imperial period. This suggests a greater influx of numismatic material in a more recent timeframe, potentially providing insights into the economic and historical dynamics of Paestum during the imperial era (Cantilena, Pellegrino, Pantuliano, Satriano 2003, 25–156). Considering the city's history, the scarcity of late antique coins is expected. Similarly, later coin series, while indicating continuous occupation of the area, offer limited insights into the gradual abandonment of the site and the military events impacting the region.[9]

[5] These are the hoards *IGCH* 1876 (Pozzi 1962–64, 77–82), *IGCH* 1892 (Pozzi 1962–64, 82–90), *IGCH* 1893 (Pozzi 1962–64, 91–109; Kraay 1967, 127–129).

[6] A survey at Museo Archeologico Provinciale of Salerno made it possible to identify more groups of coins collected in past excavations in the urban area of Paestum, such as those from the Villa Salati property.

[7] A gold stater from Lampsacus (see Cipriani 2012, 104; Cantilena 2017, 323–327); an aureus of Clodius M.f., and one of Augustus (see Carbone 2016, 101).

[8] To these must be added the recent discovery of two other small hoards made of bronze coins – from the excavations carried out in the Licinella area (not in the necropolis area located here, but most probably during the building of infrastructure) in the 1930s – both still with a small jar in which they were contained.

[9] Recent research on the Paestum material has made it possible to detail the post-classical material and

However, it is crucial to recognise that a substantial number of coins face uncertain attribution due to their deteriorated condition and limited legibility. Many of these coins are awaiting restoration, and based on their specific features – especially in terms of module and weight – they appear to align with the final bronze emissions of Poseidonia or Paestum semisses and quadrants. This would complement the evidence of coins originating from the local workshop.

The reconstruction of provenances from archaeological contexts also allows us to reason about their quality. On the attestations of the various types of coins in situations that – although referable to the same territorial compartment – have different connotations, modes, and phases of use. This may be, just to cite an example, the case of coins from the Heraion of Foce Sele (an important extra-urban sanctuary that has long-standing frequentation) and urban area contexts.

In general, single finds are characterised by the good presence of bronze coins. But, if we look at republican small change, several of these specimens come from the area of the Sanctuary of Foce Sele, while a few others from the city are usually associated with early imperial local coinage.

There is indeed a discrepancy between the two contexts. Republican bronze coinage is much more prevalent in the area of the Heraion of Foce Sele, while it is scarcer in the urban area. This datum is closely related to the characterisation of the contexts. It is sufficient to consider that the area within the walls underwent major upheavals precisely in the final years of the Republic with the construction of large, monumental buildings that caused great upheavals in the terrain (**Fig. 1**).

Therefore, before considering the presence of Roman Republican coins as indicative of their diffusion, it is necessary to assess the reliability of the lying conditions.

Still on the subject of the presence of Republican coins at Paestum, one last element can be analysed: the presence of a good number of fractional coins. Silver and bronze coins are found more frequently than in neighbouring sites. We have no data to determine the time of their frac-

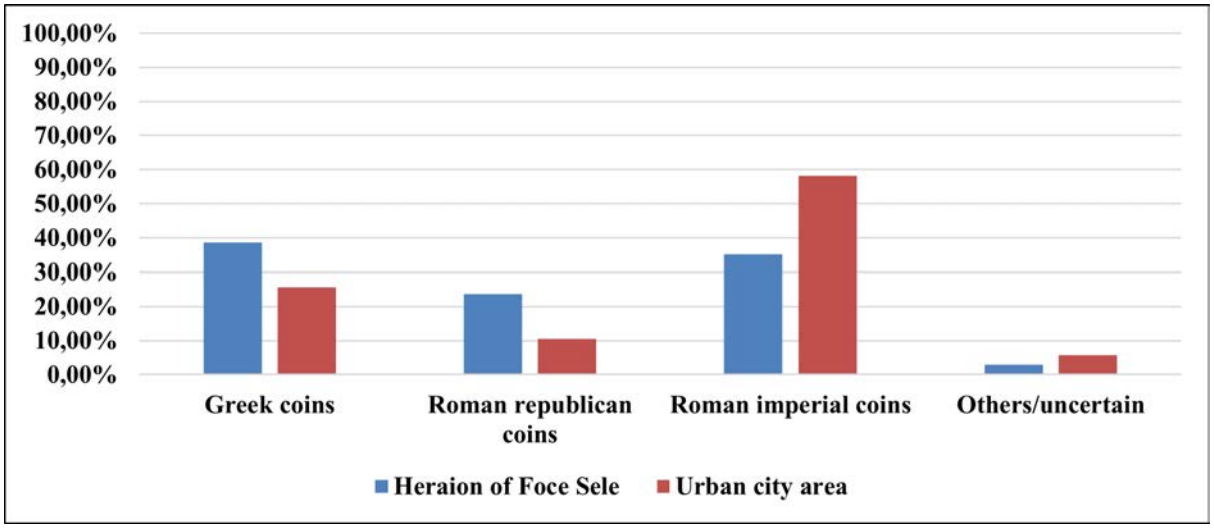


**Fig. 1.** Distribution of finds of individual bronze coins between the area of the extra-urban sanctuary of Foce Sele (Heraion) and those of the urban area.

to enrich what has already been identified (see Sallusto 1969–1970, 247–251). Currently, discoveries within the urban area and the Heraion of Foce Sele reveal notable concentrations dating back to the Swabian and Aragonese periods. Exclusive to the Heraion are findings of coins belonging to the Byzantine series, underscoring a continuous habitation spanning the 10th to the 19th centuries. Meanwhile, the walled area exhibits more substantial concentrations, although certain gaps persist in the documentation. Additionally, evidence from modern times, particularly Bourbon coins from the site's latest phases, further enriches the historical narrative uncovered by these coin finds. (see Carbone 2022b, 223–250).

tioning, but it is evident — especially from hoards — that these circulated together with local coins. Broken asses and semisses are associated on a fairly regular basis.

### The "Paestum Coin Finds" thematic portal

Due to the considerable volume and the specific nature of the archaeological material under consideration, we have devised a project aimed at the revision and augmentation of the documentation pertaining to these discoveries. The proposed initiative involves the development of a tool intended to establish a connection between the digital catalogue of the archaeological park and the pilot thematic project focused on Paestum within the framework of the Coin Finds Hub - Italy portal. This endeavour seeks to enhance the accessibility and comprehensiveness of our archaeological records, aligning with contemporary digital methodologies for the advancement of scholarly undertakings in our field.

This accomplishment has been made feasible through the generous support of the Foundation for Cultural Heritage and Activities, a direct emanation of the Ministry of Culture, and the collaborative efforts of partners engaged in the primary project, Coin Finds Hub – Italy (Cantilena, Carbone, Pardini 2023, 135–170; Pardini 2022, 519–527). Following the formal establishment of a comprehensive collaboration among the University of Salerno, the Archaeological Park of Paestum and Velia, and the foundation, a collaborative network has been established, driven by a shared objective: the digital exploration and documentation of Paestum's numismatic heritage, encompassing the imperative tasks of knowing, managing, analysing, and documenting.

Both the university and the Paestum Park have independently developed their digital infrastructures. Consequently, a crucial consideration arose regarding the necessity of facilitating interaction between these structures and providing data compatibility with platforms utilising different languages, such as those based on the ontology endorsed by the Nomisma.org project's working groups.

The formalisation of the network occurred through a series of agreements derived from the overarching framework agreement within the Coin Finds Hub project. The proactive collaboration of partners, particularly with the steadfast support of the Fondazione Scuola dei Beni e delle Attività Culturali (SBAC), enabled the strategic planning of three pivotal activities essential for achieving our objectives: the establishment of scholarships for aspiring scholars with a focus on numismatics, the procurement of tools and equipment for the restoration and conservation of coins, and the development of content for effectively communicating the museum's numismatic heritage, with a specific emphasis on this ground-breaking project. This whole approach underscores our commitment to advancing both scholarly endeavours and public engagement in the context of numismatics.

These three initiatives align seamlessly with the foundation's overarching mission, placing a primary emphasis on training and concurrently addressing the imperative of developing effective tools for the conservation and communication of heritage. A fourth facet, overseen by the university, acts as the coordinating force, focusing on scientific research into the materials in question, specifically the coins curated by the Archaeological Park of Paestum. This facet aims to advance the comprehensive protection and valorisation of these cultural assets.

The DiP_Coins project, strategically structured into three distinct stages, unfolded with meticulous planning. The initial phase involved the recovery of historical documentation, encompassing the transfer of paper files generated by previous study and documentation activities. Additionally, it entailed the retrieval of ancillary documents essential for reconstructing the "coin object's" biography, including labels, envelopes, tags, and cataloguing notes.

Moving to the second stage, the project concentrated on the restoration of newly acquired materials, updating existing records, and cataloguing recently discovered specimens. This phase represents a critical step in ensuring the preservation and accessibility of the numismatic heritage.

The final stage of the DiP_Coins project involved the conceptualisation and development of the Paestum Coin Finds platform. Simultaneously, data integration into the Hera Catalogue, the

digital catalogue of the Archaeological Park, was carefully executed. This comprehensive platform facilitates the seamless exploration and study of the numismatic heritage of Paestum.

Particularly noteworthy is the meticulous recovery of documentation, involving not only the assimilation of paper records from prior studies but also the retrieval of additional materials essential for reconstructing the biographies of each "coin object". These supplementary elements, such as labels, envelopes, tags, and cataloguing notes, play a crucial role in providing a comprehensive understanding of the historical context surrounding these artefacts.

Catalogue cards have emerged as the linchpin in this historical documentation recovery effort, featuring subaccounts and inventories that meticulously trace the formation of the collection. These documents describe the various compositions and competencies of the collection, offering valuable insights into the history of individual objects. This process is indispensable for reconstructing the trajectory of these artefacts, tracing their journey from the moment of discovery to their current placement. Notable examples include materials from suburban necropolis and artefacts from the Heraion of Foce Sele.

Moving into the second stage, dedicated efforts were directed towards the restoration and updating of the catalogue. This pivotal phase benefited significantly from the active participation of the park, which engaged two students from the Academy of Fine Arts in Naples. Together, a meticulously crafted work plan was devised to guide the restoration process.

The involvement of two restorers specialising in metals played a crucial role in refining their skills specifically for the restoration of coins sourced from the two distinct contexts under examination, namely the "Roman garden"[10] and the "Athenaion".[11] This focused and specialised approach ensured a nuanced restoration process, enhancing the overall preservation and study of these numismatic artefacts.

The collaboration between the Academy of Fine Arts in Naples, the archaeological park, and the skilled restorers underscored a commitment to not only fostering educational opportunities but also advancing the technical expertise required for the meticulous restoration of coins from these significant archaeological contexts. This collaborative effort serves as a testament to the multifaceted approach undertaken to safeguard and illuminate the historical significance encapsulated within these materials.[12]

Embarking on the initial phase of recovering historical documentation involved the meticulous task of converting existing paper records into a digital format. The earlier catalogues, originally in RA format, were systematically updated to adhere to NU 3.00 standards (Arslan 2004), ensuring compatibility and compliance with contemporary protocols.

The ensuing step saw the transformation of the new data sheets into .csv format, aligning with a structured model conducive to seamless integration with three distinct reference portals:

**1. Paestum Coin Finds:** This serves as the thematic portal for the overarching Coin Finds Hub – Italy project, consolidating and presenting the comprehensive data related to coin discoveries in the Paestum region.

**2**. **Hera:** The digital catalogue of the archaeological park, designed in a web-GIS format. This platform serves as a crucial repository for organising and presenting archaeological data, contributing to the scholarly exploration of the numismatic heritage within the park's purview.

**3. Platforms utilising Nomisma's ontology**: The integration with Nomisma's ontology ensures compatibility with international systems following the standards set by this prominent global network dedicated to the description and dissemination of numismatic data.

[10] The so-called Giardino romano has never been the subject of a systematic study (preliminary data are in Cipriani 2012, 97–102; Casalnuovo, Siani 2017, 647–652; Casalnuovo 2018, 787–794).
[11] A general framework is in Longo 2019, 111–121 (with previous bibliography).
[12] Restoration and cleaning work was carried out on two lots of coins characterised by the presence of a self-passivating patina, typical of the alteration of copper over time. In some cases, particularly in the case of silver or silver alloy coins, the presence of material indicative of previous restorations was noted, such as resinous patinas for protective purposes and adhesives for the adhesion of fragments.

This is without taking into account that — following the Italian national regulations on cultural heritage — all these records are in any case present on the heritage catalogue database promoted through the General Catalogue of Cultural Heritage (**Fig. 2**). This is intended to collect essential data and certainly does not have the specificity of reasoning about contextual information or the integration of documentation and related materials, but nevertheless returns an essential database.

**Fig. 2.** Example of coins from the Paestum Archaeological Park included in the General Catalogue of Cultural Heritage (https://catalogo.beniculturali.it).

Subsequently, with the retrieval of archival documentation and the completion of a cataloguing update, the transition of the previous storage of objects to a digital format marked a significant milestone. A prototype platform was then developed and utilised for a preliminary test, facilitating an initial assessment of the effectiveness and functionality of the digital model. This iterative process ensures the refinement of the platform, aligning it with the specific requirements of each reference portal and optimising its utility in facilitating the exploration and analysis of Paestum's numismatic heritage.

This is the digital catalogue of the archaeological park, meticulously designed on a web-GIS platform. This system is specifically configured to compile data related to the contexts, discoveries, and monuments uncovered through research in the Paestum area. Serving as a collaborative digital platform, it enables the effective management and accessible consultation of artefacts, documents, and images associated with the archaeological heritage under the jurisdiction of the park.[13]

This tool boasts numerous capabilities, with a standout feature being the ability to geo-reference all the documented finds and link them to dedicated in-depth sheets, complete with essential information adhering to the ICCD standards. The user-friendly graphical interface has been thoughtfully structured to streamline consultation and study activities for the end user. Notably, all elements are integrated within the same cartographic system utilised for the numismatic portals within the Nomisma network, especially those employing the Numishare software.[14] This ensures a cohesive and seamless experience, enhancing the accessibility and interconnectedness of information for scholars and enthusiasts alike,[15] namely the Leaflet application.

Therefore, the Hera system excels in delivering comprehensive data on archaeological contexts, presenting them on updated cartography while seamlessly integrating relevant graphic, descriptive, and bibliographic documentation. This inclusive system extends its coverage to both tangible and intangible evidence, encompassing a spectrum from more conspicuous monuments to the material culture derived from them. Essentially, it embodies the practical implementation of a cultural endeavour aligned with the principles of "public archaeology". By rendering archival data, excavation reports, restoration efforts, and cartographic elements accessible to a broad audience, it acts as a catalyst for knowledge and identity-building processes.

This approach equips individuals with the tools to initiate a multifaceted process of understanding and constructing identity, generating interpretive pathways at various levels. From the engagement of interested users with individual discoveries to the requirements of scientific research, the Hera system plays a pivotal role in fostering accessibility, engagement, and scholarly exploration within the realm of archaeology.

From a Geographic Information System (GIS) perspective, the Hera Catalogue is structured with two seamlessly integrated interfaces, namely a record-keeping and a cartographic component. The schedographic component comprehensively incorporates all the documentation related to the materials, systematically organising them into specific categories. Presently, the catalogue encompasses more than 27,000 items catalogued according to the ICCD standards. This extensive repository includes plans and documentation of both a scientific and administrative nature, bibliographic references, photographs, detailed records of mobile finds, and archaeological reference surveys.

Moreover, the documentary section of the catalogue includes maps that can be modified,

[13] A summary of the methodology and approach of the Hera Digital Catalogue can be found in Zuchtriegel, Scelza, Auci, De Vita, 2022.
[14] https://numishare.blogspot.com/ [last accessed 01/03/2024].
[15] This is a comprehensive set of open-source applications designed for the digital administration of archaeological artefacts, specifically emphasising numismatic objects. Developed and consistently updated by the American Numismatic Society, this software was initially employed to establish its online database (https://numishare.blogspot.com/). The application framework relies on XML, and the detailed description of coins adheres to an XML adaptation of NUDS, the Numismatic Description Standard (http://nomisma.org/nuds). For the depiction and coding of other materials, VRA Core 4.0 is utilised.

exported, and supplemented by authorised personnel working within the structure. This dynamic feature not only enhances the adaptability of the system but also allows for collaborative contributions, ensuring that the catalogue remains a living and evolving resource within the framework of archaeological research and documentation.

The second interface is inherently cartographic, realised through a georeferenced, computerised map of the ancient city. This cartographic interface remains highly dynamic, allowing for complete updatability through the addition and overlay of additional documentation derived from diverse sources across different scales and temporal contexts. This includes surveys, cadastral maps, regional technical maps, and more.

The seamless integration of these two catalogue components holds the key to digitally reconstructing the contextual link between the archaeological finds, specifically the coins, and the locations and events of their discovery. This intricate process enables the reconnection of this specific class of material with the original research endeavours that produced it and the accompanying documentation related to it. This digital reconstruction enhances the depth of understanding by placing numismatic artefacts within their historical and spatial contexts, fostering a more comprehensive and nuanced interpretation of their significance.

### The integration with the Nomisma.org network

In conjunction with the assimilation into the Hera Catalogue, successful testing has been carried out for the integration with the Nomisma.org network platforms. A noteworthy aspect is that certain platforms within the Nomisma.org network are inherently organised as thematic portals. This inherent structure facilitates a seamless incorporation of the data generated by the DiP_Coins project now available on the thematic portal Paestum Coins Finds. The synergy between these platforms and the DiP_Coins initiative underscores the adaptability and complementary nature of the project within broader networks dedicated to the systematic exploration and dissemination of numismatic data. This collaborative integration will serve to enhance the accessibility and visibility of the DiP_Coins project, embedding its findings within a broader scholarly landscape dedicated to the nuanced understanding and appreciation of numismatic heritage.

These are, for example, the thematic projects on Greek[16] Roman Republican[17] and Imperial hoards[18], on Republican[19] and Imperial coinage[20], as well as provincial issues[21] including the latest Paestum coin production as minted in the administrative unit of Lucania during the years of Augustus and Tiberius.

In this particular scenario, the importation of Paestum coin records was seamlessly executed using the same dataset employed for the Hera Catalogue integration. This achievement owes its success to the semantic alignment facilitated by the Coin Finds Hub – Italy project. This initiative correlates the terms outlined by the NUDS (Numismatic Description Schema) with the national NU 3.00 standards, ensuring a harmonious and consistent integration process. Moreover, to accommodate the unique characteristics of Paestum coins, specific fields have been incorporated for collecting contextual data.

In the case of these coins, it was imperative to integrate data from other portals managed by a sizable and specialised network. This strategic collaboration was essential for implementing a robust preservation strategy for the data. The act of sharing datasets across portals, each associated with different projects and ontological models, while maintaining communication, not only facilitates integration but also ensures the medium-term preservation of the transferred information.

Furthermore, the open accessibility of this information base creates opportunities for utilisa-

[16] Inventory of Greek Coin Hoards (IGCH): http://coinhoards.org/.
[17] Coin Hoards of the Roman Republic (CHRR): http://numismatics.org/chrr/.
[18] Coin Hoards of the Roman Empire (CHRE): http://chre.ashmus.ox.ac.uk/.
[19] Coinage of the Roman Republic Online (CRRO): http://numismatics.org/crro/.
[20] Online Coins of the Roman Empire (OCRE): http://numismatics.org/ocre/.
[21] Roman Provincial Coinage online: http://rpc.ashmus.ox.ac.uk/.

tion in third-party projects. This aligns with the broader objective of disseminating the outcomes of scientific research and fostering the reuse of data to catalyse the generation of new knowledge processes. The interconnectedness and openness of these data systems contribute significantly to the collaborative and cumulative nature of scientific endeavours in the field of numismatics.

## Bibliography

Arslan, E. et alii, 2004. Strutturazione dei dati delle schede di catalogo. Scheda NU. Beni Numismatici, Roma.

Cantilena, R., 1999. Circolazione monetaria a Paestum tra Greci, Lucani e Romani. Annali dell'Istituto Italiano di Numismatica 46, 126–151.

Cantilena, R., 2000. Il gruzzolo di denari da Paestum, Un rinvenimento di età augustea. Roma.

Cantilena, R., 2010. Rinvenimenti monetali, in: De la Geniere, J., Greco, G. (eds.), Il santuario di Hera alla foce del Sele: indagini e studi 1987-2006 (Atti e memorie della Società Magna Grecia). Roma, 685–732.

Cantilena, R., 2011. Monete dal santuario di Hera alla Foce del Sele (Paestum). Nuovi dati e vecchi scavi. Rivista Italiana di Numismatica e Scienze Affini 112, 15–28.

Cantilena, R., 2017. Una moneta d'oro di Lampsaco a Poseidonia, in: Caccamo Caltabiano, M., Carroccio, B., Castrizio, D., Puglisi, M., Salamone, G. (eds..), XV International Numismatic Congress - Taormina 2015. Proceedings. Arbor Sapientiae, Roma-Messina, 323–327.

Cantilena, R., 2020. Elargire moneta tra tarda repubblica e prima età imperiale: ripensando alle coniazioni di Paestum, in: Osanna, M. (eds.) Ricerche e scoperte a Pompei. In ricordo di Enzo Lippolis (Studi e Ricerche del Parco Archeologico di Pompei 45). L'Erma Di Bretschneider, Roma, 407–414.

Cantilena, R., 2022. La monetazione in bronzo di Poseidonia, cinquanta anni dopo, in: Greco, E., Longo, F., Pontrandolfo, A. (eds.), Studii Florens. Miscellanea in onore di Marina Cipriani per il suo 70° compleanno (Tekmeria 20). Pandemos, Paestum, 201–222.

Cantilena, R., 2023. Monete dagli scavi della missione austriaca a Velia: questioni di cronologia e di usi rituali, in: Gassner, V., Krinzinger, F., Sokolicek, A. (eds.) 1971–2021: 50 anni di ricerche austriache a Velia, Atti del Convegno (16-17 settembre 2021), Phoibos Verlag, Wien, 245–265.

Cantilena, R., Carbone, F., 2015, Poseidonia-Paestum e la sua moneta, Pandemos, Paestum.

Cantilena, R., Carbone, F., Pardini, G. 2023, "Paestum, Velia, Pompeii: Monetary Policies in Tyrrhenian Campania from the 2nd Century BC to the 1st Century A.D.", in: Archaeology and Economy in the Ancient World (Propylaeum 54). Heidelberg, 463–466.

Cantilena, R., Pantuliano, S., Pellegrino, M., Satriano, M., 2005. Monete da Paestum (I–IV d.C.), Annali dell'Istituto Italiano di Numismatica 50, 25–156.

Cantilena, R., Pellegrino, M., Satriano, M., 2001. Monete da Poseidonia-Paestum. Trasformazione e continuità tra Greci, Lucani e Romani, Annali dell'Istituto Italiano di Numismatica 46, 9–154.

Cantilena, R., Rovelli, A., Sanguì, L., "Towards a Contextual Approach to Numismatics: A Methodological Reflection", Numismatica e Archeologia 2018, 179–189.

Carbone, F., 2014. Le monete di Paestum tra I sec. a.C. e I sec. d.C. Analisi dei Conî (Collana di Numismatica e Scienze Affini, 8), Società Numismatica Italiana, Milano.

Carbone, F., 2016. 8.2 Aureus Lyon, in: Zuchtriegel, G. (eds.) Possessione. Trafugamenti e falsi di antichità a Paestum. Electa, Napoli, 101.

Carbone, F., 2017a. Riconiazioni e cambi d'uso nella moneta di Paestum, in: Cipriani, M., Pontrandolfo, A., Scafuro, M. (eds.). Dialoghi sull'Archeologia della Magna Grecia e del Mediterraneo. Atti del II Convegno Internazionale di Studi. Pandemos, Paestum, 443–450.

Carbone, F., 2017b. Semissi pestani a Pompei: dati sulla circolazione, in Caccamo Caltabiano, M., Carroccio, B., Castrizio, D., Puglisi, M., Salamone, G. (eds.), XV International Numismatic

Congress - Taormina 2015. Proceedings. Arbor Sapientiae, Roma-Messina, 710–712.

Carbone, F., 2019. Da vecchi scavi a Velia un 'nuovo' tesoretto di I sec. a.C.. Rivista Italiana di Numismatica e Scienze Affini 120, 331–340.

Carbone, F., 2022a. Il progetto DiP_Coins un modello di gestione in digitale per le monete da Paestum, in: Pennestrì, S. (ed.), VERSO IL FUTURO - Esperienze, progetti e casi di studio tra tutela, fruizione e comunicazione del patrimonio numismatico pubblico, Atti del IV Incontro di studio „MEDAGLIERI ITALIANI, Notiziario del Portale Numismatico dello Stato – serie Medaglieri Italiani 7. Roma, 529–538.

Carbone, F., 2022b. Rinvenimenti monetali post-classici dal territorio di Paestum, in: Greco, E., Longo, F., Pontrandolfo, A. (eds.), Studii Florens. Miscellanea in onore di Marina Cipriani per il suo 70° compleanno, (Tekmeria, 20), Pandemos, Paestum, 223–250.

Carbone, F., 2024. Magistrates and citizens: the coinage of Paestum following the RBW Collection, , Revue Belge de Numismatique et de Sigillographie 170, 245–260.

Carbone, F. 2024a. Moneta frazionata a Paestum. Alcune considerazioni sui rinvenimenti in area urbana, in Pardini, G., Perassi, C. (eds.), Monete frazionate. Quadri regionali, questioni cronologiche, aspetti economici. Quasar, Roma, 129–139.

Carbone, F., 2025, Da città dei Lucani a colonia latina. La moneta di Paestum dopo il 273 a.C., in Cavagna, A., Perassi, C. (eds.), Temi di monetazione coloniale romana. In ricordo di Ermanno Winsemann Falghera, Collana di numismatica e scienze affini 13. Società Numismatica Italiana. Milano, 91–118

Carbone, F., Grimaldi, J., 2014. La costruzione del catalogo informatizzato delle monete del Museo Archeologico Nazionale di Paestum in rapporto al GIS "Paestum e il suo territorio", in: Pennestrì, S. (ed.) Medaglieri italiani, un tesoro di storia. Notiziario del Portale Numismatico dello Stato 4, Roma, 92–97.

Carbone, F., Pardini, G., 2024. Data management for coin finds and archaeological contexts in the Naples-Velia area, in: Mondello, C., Puglisi, M. (eds.), The 8th Joint Meeting of ECFN and nomisma.org 2019, Atti (Università degli Studi di Messina, 2–4 maggio 2019), Atti della Accademia Peloritana dei Pericolanti - Classe di Lettere Filosofia e delle Belle Arti, Supplemento, 31–38.

Casalnuovo, C., 2018. Poseidonia-Paestum: la ceramica proveniente dal c.d. Giardino romano, in: Cipriani, M., Pontrandolfo, A., Scafuro, M. (eds.), Dialoghi sull'Archeologia della Magna Grecia e del Mediterraneo. Atti del II Convegno Internazionale di Studi. Pandemos, Paestum, 787–794

Casalnuovo, C., Siani, C., 2017. Poseidonia-Paestum: nuovi data dall'area del c.d. "Giardino Romano", in: Pontrandolfo, A., Scafuro M. (eds.), Dialoghi sull'archeologia della Magna Grecia e del Mediterraneo. Atti del I Convegno internazionale di studi. Pandemos, Paestum, 647–652.

Cipriani, M., 2012. Le testimonianze in città e nel territorio', in: Biraschi, M., Cipriani, M., Greco, G., Taliercio Mensitieri, M. (eds.), Poseidonia-Paestum, Culti greci in Occidente. Fonti scritte e documentazione archeologica 3. Taranto, 27–170

Crawford, M.H., 1973. Paestum and Rome. The Form and Function of a subsidiary Coinage. Annali dell'Istituto Italiano di Numismatica, suppl. 18–19, 47–109.

Crawford, M.H., 1976–77. The Imperial Bronze Coinage of Paestum. Annali dell'Istituto Italiano di Numismatica 23–24, 151–159.

Debernardi, P., Carbone, F., 2018. The Ara Basilica and Smaller Victoriati Hoards from Paestum, The Numismatic Chronicle 178, 305–314.

Ebner, P., 1970. Rinvenimenti monetari a Paestum. Rivista Italiana di Numismatica e Scienze Affini 72, 19–44.

IGCH = Thompson, M., Mørkholm, O., Kraay, C. M., 1973. An Inventory of Greek Coin Hoards, New York.

Kraay, C. M., 1967. Gli stateri a doppio rilievo di Poseidonia'. Atti della Società Magna Grecia 7. Roma, 113–135.

Libero Mangieri, G., 2006. La monetazione di Poseidonia-Paestum e Velia nella Collezione Sallusto, Bollettino di Numismatica 46–47, Roma.

Longo, F., 2019. Il centro urbano, il santuario di Athena, in: Zuchtriegel, G., Carter, P., Oddo, M. E. (eds.), Poseidonia città d'acqua: archeologia e cambiamenti climatici. Pandemos, Paestum, 111–122.

Pardini, G., 2022, Il progetto Coin Finds Hub – Italy/Rinvenimenti monetali in Italia tra collaborazioni e ricerca, in: Pennestrì S. (eds.), VERSO IL FUTURO - Esperienze, progetti e casi di studio tra tutela, fruizione e comunicazione del patrimonio numismatico pubblico, Atti del IV Incontro di studio. MEDAGLIERI ITALIANI, Notiziario del Portale Numismatico dello Stato – serie Medaglieri Italiani 7. Roma, 519–527

Polosa, A., 2000. Il gruzzolo di monete di bronzo, in Cantilena, R., Il gruzzolo di denari da Paestum, Un rinvenimento di età augustea, Roma, 113–117

Pozzi, E., 1962–64. Ripostigli di monete greche rinvenuti a Paestum, Annali dell'Istituto Italiano di Numismatica 9–11, 75–160.

Prisco, G., 1981. Tra economia e società: la moneta e la tomba a Poseidonia, Annali dell'Istituto Italiano di Numismatica 27–28, Roma, 23–56.

Sallusto, F., 1969-70. Museo Archeologico Nazionale di Paestum, Annali dell'Istituto Italiano di numismatica 16–17, 247–251.

Sallusto, F., 1971-72. Il materiale dalle necropoli pestane di IV e III sec. a.C.: precisazioni sulla moneta enea e nuovi problemi, "Annali dell'Istituto Italiano di Numismatica", 18–19, 57–71.

Scafuro, M., 2019. Le Necropoli di Poseidonia-Paestum. Santa Venera (Scavo 1976), Ergasteria 8.1, Paestum.

Sestieri, C., 1967. La città, la necropoli preistorica in contrada Gaudo, lo Heraion alla foce del Sele, Roma.

Zuchtriegel, G., Scelza, F.U., Auci, R., De Vita, C.B. 2022. La piattaforma Hera per il Parco Archeologico di Paestum e Velia https://www.archeomatica.it/documentazione/la-piattaforma-hera-strumento-per-la-digitalizzazione-e-gestione-del-patrimonio-culturale-nel-parco-archeologico-di-paestum-e-velia [last accessed 01/08/2025].

# IGCH 1993. Old and New Data on the Mottola Hoard from the Museo Archeologico Nazionale di Taranto

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**Abstract:** Since 2019, the Museo Archeologico Nazionale di Taranto (MArTA) has started an ambitious cataloguing programme that encompassed, among other artefacts, a huge number of coins. Some of them have already been published, while some others are still unedited. The contribution offers some new data on a hoard of Tarentine horsemen known from a note by the then-director of the museum published in 1930.

**Keywords:** MArTA, Taranto, Mottola, Quagliati, Tarentine Horsemen.

BulgNJ

The Museo Archeologico Nazionale di Taranto (MArTA) is one of the most important museums in Italy (**Fig. 1**). Founded in 1887, but first opened to the public in 1903, the museum houses a vast collection of archaeological artefacts that testify to the importance of Taranto and its surroundings in antiquity (Quagliati 1932; Degrassi 1963; Dell'Aglio 2013; Tondo 2016; Libero Mangieri 2016). The coin collection has grown since the opening of the museum, both through purchases or seizures from the antiques market and through the acquisition of coins from excavations, reaching a total of thousands of coins. Thus, due to the process of creation and progressive growth of the coin collection — which is inextricably linked with the territory where Taranto is located — the coins kept in the museum are an important element for understanding the history of Taranto and its entire region, even more so considering that coin finds cover a long historical period ranging from the Archaic to the Medieval Age (Libero Mangieri 2016).

The history of the coin collection began as early as 1903, when Quintino Quagliati became the director of the museum; he was an expert in Protohistory, but he also had a deep knowledge of ancient coins; indeed, he took care of acquiring coins and hoards found in Taranto and in the whole Puglia region, keeping them in the museum and publishing these acquisitions in brief notes and papers (Quagliati 1904; Quagliati 1906; Quagliati 1930; Quagliati 1932). The tradition started by Quagliati continued over the years with subsequent directors, allowing the museum's coin collection to increase significantly (Tondo 2016). In the 2000s, a great work on the organisation and systematisation of the materials related to the coin cabinet — that is not only the coins, but also the acquisition of documents and reports accompanying them — was completed with the publication of a volume of the *Notiziario del Portale Numismatico dello Stato* (Libero Mangieri, Pennestrì 2016).

**Fig. 1.** Taranto, Museo Archeologico (Quagliati 1932).

Since 2019, the MArTA has launched an ambitious cataloguing project, which involved the artefacts exhibited in the museum, but also the thousands of objects and artefacts stored in its warehouses. The cataloguing process, which engaged a large team of experts in different fields of study, also encompassed 11,550 coins. Each piece had its own preliminary report that contained essential information according to the Italian regulations for the cataloguing of numismatic finds. All the collected data, including photos of the coins, were incorporated into a database that will work as a virtual display of the museum's materials. The coins were catalogued as part of a scientific collaboration between the MArTA and La Sapienza University of Rome under the supervision of the author. Thus, the cataloguing work carried out from 2019 onwards and incorporated into the online database is somehow complementary to the reorganisation and editing efforts carried out over the years, enabling the acquisition of additional information and data to supplement what has already been collected and partly published. These resources will be protected from loss by digitalisation, which will also improve their accessibility and shareability.

## IGCH 1993. Some preliminary data

This hoard was found in the territory of Mottola, 25 km northwest of Taranto (**Fig. 2**) in 1926. It is one of the hoards acquired by Quagliati, who bought it directly from the discoverer: '*durante l'agosto del 1926 fu trovato in contrada "San Sabino" dell'agro di Mottola nella provincia ionica un tesoretto di didrammi tarantini d'argento e l'inventore signor Antonio Greco lo consegnò in due volte a me che ne feci acquisto per il Museo Nazionale di Taranto*' (Quagliati 1930, 1; **Fig. 3**).

The treasure consists of 96 silver Tarantine *nomoi*, all in good condition, dating from the second to the third quarter of the 3rd century BC, in the so-called period of the Roman Alliance (Evans 1889, 8–9).

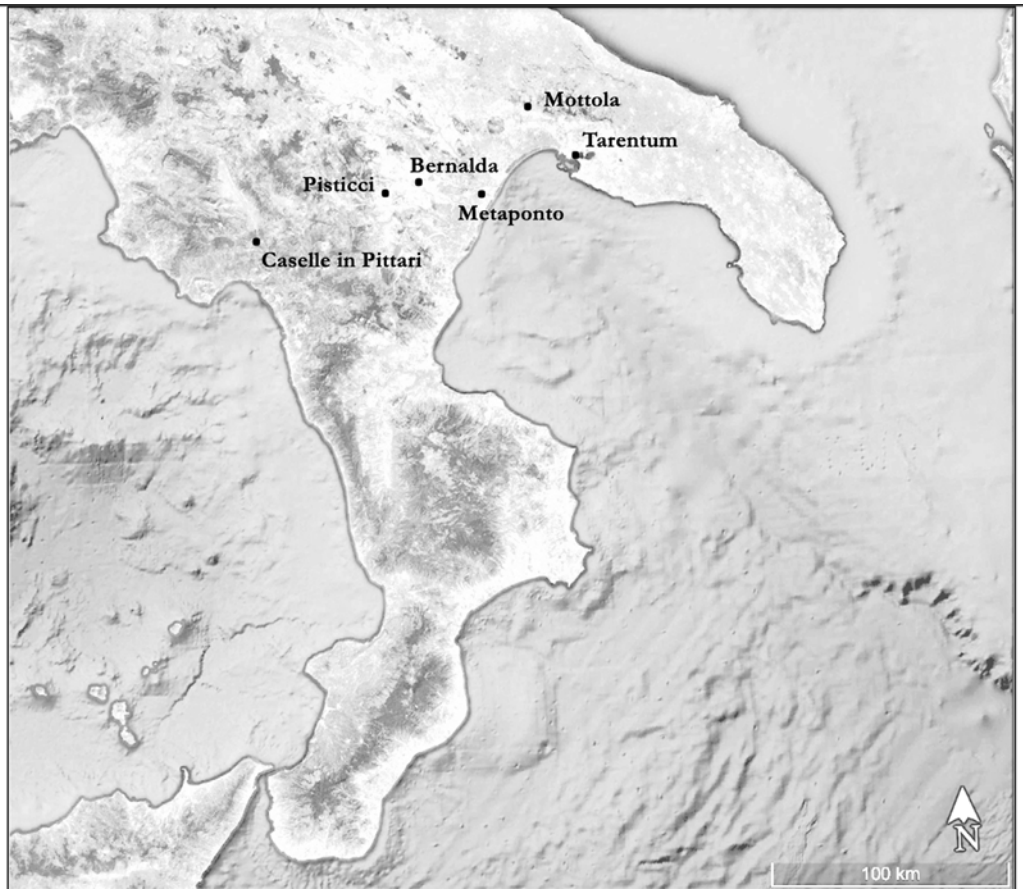


**Fig. 2.** 3rd-century coin hoards found west of Tarentum (based on Gorini 2013).

## The historical context

The 3rd century BC began with the onset of the conflict between Rome and Tarentum: in 282 BC, ten Roman ships appeared in the Gulf of Tarentum, violating the treaty signed a few years earlier at Capo Lacinio. The Romans devastated the territory of Tarentum, which sent an embassy to Epirus seeking help from Pyrrhus, who invested many resources in the war: 'first, then, he sent Cineas to Tarentum with three thousand soldiers; next, after numerous cavalry-transports, decked vessels, and passage-boats of every sort had been brought over from Tarentum, he put on board of them twenty elephants and three thousand horse, twenty thousand foot, two thousand archers, and five hundred slingers. (…)Then, Pyrrhus sprang up and threw himself into the sea, and his friends and bodyguards were at once emulously eager to help him' (Plut. *Pyrrh.* 15.2; translation: Perrin 1920). The conflict continued until 272 BC when the Epirotes withdrew and Tarentum surrendered to Rome, handing over its weapons and ships, demolishing the walls, and agreeing to pay a tribute (Lippolis 1997, 39–41; Polyb I.20; II.24.13; III.75.4; Livy XXIII.1; XXIV.131). The fall of Tarentum paved the way for Rome to conquer the surrounding territory of Messapia, which was carried out in the following years by the consuls A. Regulus and I. Libo in 267 BC, and F. Pictor and I. Pera in 266 BC.

The Roman victory in 272 BC marked Taranto's entry into the sphere of influence of Rome, with a new political balance that lasted until the end of the century: the Roman policy ensured some tranquillity for the Greek polis, which remained an important pole in the region thanks to its port, destined to be only slowly replaced by the harbour of the newly-founded colony of Brundisium (Polyb X.1; Uggeri 1986; La Bua 1988; Guzzo 1990; Lippolis 1997, 39). During the Second Punic War, Taranto initially provided Rome with ships to take the army to Sicily (Polyb. I.20-13–14) but then defected in favour of Hannibal, who entered the city in 213 BC. In 209 BC, the consul Q. Fa-

bius Maximus reconquered the city, which was severely punished: 'many of the Tarentines also were slain, thirty thousand of them were sold into slavery, their city was plundered by the Roman army, and three thousand talents were thereby brought into the public treasury' (Plut. *Fab. Max*. 21–23, translation: Perrin 1916; see also: App. *Hann.* 49.50; Cic. *De or.* 2.273; *Brut.* 73; *Cato* 10.1; *Verr.* 2; Strab., VI.3; Sil. 15. 320; Plin., *nat.* 34). Part of the territory was confiscated, becoming *ager publicus*, and the minting of coinage was forbidden (Polyb. VIII, 26–36; Livy XXVII. 168; XXXV.16). From this moment on, Rome often intervened directly in the affairs of the city (Lippolis 1997, 40).

| N. | DRITTO | ROVESCIO | PERIODO VIII DELL'EVANS (272-235 a. Cr.) | | N. DEGLI ESEMPLARI |
|---|---|---|---|---|---|
| 1 | ΑΡΙΣΤΙΣ, áncora | | A | 1 | 1 |
| 2 | ⊢ ΙΣΤΙΑΡ, ΕΥ | grappolo d'uva | A | 10 | 4 |
| 3 | ΛΥΚΙΝΟΣ, ΣΥ | civetta | A | 9 | 24 |
| 4 | ΦΙΛΩΤΑC, ΔΙ | gallo | A | 11 | 3 |
| 5 | ΑΓΑΘΑΡΧΟΣ | torcia | B | 1 | 5 |
| 6 | ΦΙ, ΙΩΠΥΡΟΣ | ape | B | 2 | 3 |
| 7 | ΛΕΩΝ | AV, leone passante | B | 3 | 2 |
| 8 | AP, KYNΩN, maschera barbata. | | B | 4 | 1 |
| 9 | ΕΥ, ΞΕΝΕΑΣ, ΦΙ | spiga di grano | C | 1 | 1 |
| 10 | ΦΙΛΙCKOC | tripode | F | 1 | 1 |
| 11 | ΑΡΙΣΤΟΚΡΑΤΗΣ, ΦΙ | ΓΙ, termine | L | 1 | 6 |
| 12 | ΔΑΜΟΚΡΙ, ΕΥ | tripode | L | 3 | 1 |
| 13 | ΦΙΛΗΜΕΝΟΣ, ⊢ Ι | bucranio | E | 1 | 1 |
| 14 | ⊢ ΗΡΑΚΛΗΤΟΣ | ΕΠ, thymiaterion | G | 1 | 6 |
| 15 | ΔΙ, ΑΠΟΛΛΩΝΙΟΣ | | H | 1 | 4 |
| 16 | ΘΙ, ΑΡΙΣΤΟΚΛΗΣ | timone | H | 2 | 5 |
| 17 | ⊢ ΙΠΠΟΛΑ | ΔΙ, anfora | K | 1 | 2 |
| 18 | ΔΙ, ΑΡΙΣΤΟΚΛΗΣ | testa di ninfa | D | 1 | 26 |
| | | | | *Totale* | 96 |

**Fig. 3.** The content of IGCH 1993 (Quagliati 1930).

## The coins

Although a die study of the Tarantine coins is yet to be done, the coinage of Tarentum underwent a systematic organisation by A. Evans at the end of the 19th century (Evans 1889; **Fig. 4**). The chronology proposed by the scholar, based on the technical and typological features of the coins, put them in a sequence that took into account the significant historical events the polis underwent. Thus, Evans divided the coin issues into ten periods, each with a precise chronology. Evans' work was later on the subject of discussions and adjustments (Vlasto 1930; Jenkins 1979; Crawford 1985; Guzzetta 1987; Taliercio Mensitieri 1989; Mattingly 1991; Fischer-Bossert 1999; Garraffo 2002; Burnett 2005; Carroccio 2011; Libero Mangieri 2012; Fischer-Bossert 2013), with an overall elaboration done by K. Rutter in his *Historia Numorum Italy* (Rutter 2001), also adopted in the catalogue presented below.

The coins contained in IGCH 1993 all fall within Evans' period VIII. The chronology of this group is still debated: Evans dated it to 272–235 BC, immediately after the peace with Rome, while A. Burnett proposed to date it 264–241 BC, linking the issues to the need to cover expenses of the First Punic War (Burnett 1977, 92–121; Burnett 2005, 161–168). In any case, the coins fall

in a period during which Taranto effectively became part of Rome's sphere of influence. They are all minted following a reduced standard, introduced at the beginning of the century and based on a weight of 6.6 g (Evans 1889, 6–8 and 143–144; Rutter 2001, 102–104). They bear a horseman in various poses on the obverse and the well-known dolphin rider on the reverse, which is also characterised by the presence of several symbols. On the obverse, the legend always consists of a male name, generally interpreted as that of the mint magistrates or as that of the wealthy citizens who had to provide coinage for the polis (Evans 1889, 24–26, 173–175; Fischer-Bossert 1999, 309–404; Cantilena 2013, 39–40). On the reverse, there is always the legend recalling the name of the polis, ΤΑΡΑΣ. Evans, based on the observation of coins produced during this period – which show a good technical level and a variety of symbols perhaps to be connected to Taranto's productive and commercial activities – had hypothesised that this must have been a moment of great prosperity for the polis, which must have maintained an important role thanks to its port even after the resolution of the conflict with Rome:

> "The abundance of these late types is a speaking proof that the enforced alliance with Rome had not, at least after the first excesses of the occupation, sensibly impaired the material prosperity of the Tarentines (...). Types and symbols of some of the didrachms supply us with a remarkable piece of evidence tending to prove that the Tarentine commerce was still in a position to dominate some of the south Italian markets" (Evans 1889, 169–170).

Similar observations were made by Quagliati when publishing a brief note on the hoard:

> "I simboli che s'incontrano sui rovesci delle monete sono pure significativi di un'età di raccoglimento e di lavoro sotto i freni della predominanza romana. Così il grappolo d'uva (…) e la spiga di grano (…) illustrano l'ubertosità dei vigneti tarantini e le vigorose messi dei campi sativi; il termine nella doppia dramma (…) sembra addurre il monito d'essere sacra la inviolabilità dei confini delle terre coltivate; l'ape (…) esalta l'apicoltura, piccola e proficua industria che si associa all'agricoltura, e pare voglia testimoniare il rifiorire della produzione del miele. Egualmente l'anfora di foggia panatenaica, munita del coperchio a pomello, (…) può indicare abbondanza d'olio, se non anche di vino e di miele, sostanze che nelle anfore solevansi conservare. Il timone (…) allude al traffico mercantile del porto di Taranto" (Quagliati 1930, 8–9).

| | | |
|---|---|---|
| I. | Transitional | 450 - 430 BC |
| II. | | 420 - 380 BC |
| III. | Age of Archytas | 380 - 345 BC |
| IV. | Archidamos and the first Lucanian War | 344 - 334 BC |
| V. | From the Molossian Alexander to the Spartan Kleonymos | 334 - 302 BC |
| VI. | From Kleonymos to Pyrrhus | 302 - 281 BC |
| VII. | The Pyrrhic Hegemony | 281 - 272 BC |
| VIII. | The Roman Alliance, I | 272 - 235 BC |
| IX. | The Roman Alliance, II | 235 - 228 BC |
| X. | The Hannibalic Occupation | 212 - 209 BC |

**Fig. 4.** The chronology of the horsemen according to Evans (Evans 1889, 8–9).

As a matter of fact, even if the abundance of some issues, such as the ones of ΛΥΚΙΝΟΣ and ΑΡΙΣΤΟΚΛΗΣ (which are also well represented in IGCH 1993: **Figs. 5–7**), seems to suggest the occurrence of particular peaks in coin production; still, the lack of a die study makes it currently impossible to assess the volume of the issues accurately. However, archaeological data seem to indicate that in the 3rd century Taranto did not face a break related to military events, since a certain continuity is attested by archaeological evidence (Lippolis 1997, 39–40; Lombardo 2016). Thus, the minting of the coins contained in IGCH 1993, all falling in the chronological interval between 272 and 235 BC, could be related to the phase of prosperity experienced by the city before the outbreak of the First Punic War, but at the same time could correspond, at least in part, to the need to meet war expenses to support first Rome and then Hannibal.

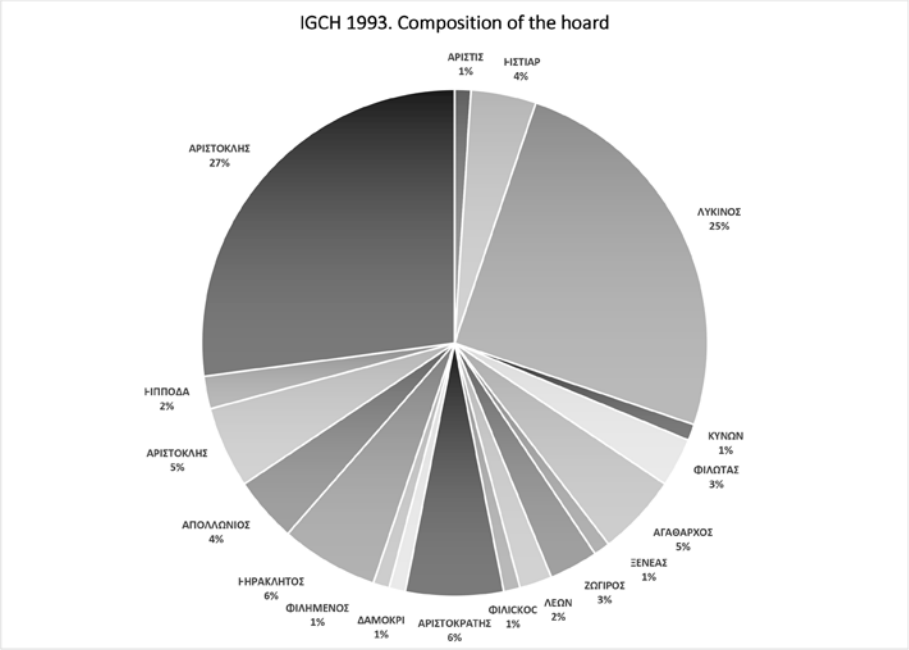


**Fig. 5.** The different issues in the hoard IGCH 1993.

**Fig. 6.** IGCH 1993, a coin of ΛΥΚΙΝΟΣ (Rutter 2001, no. 1025). Courtesy of MArTA.

**Fig. 7.** IGCH 1993, a coin of ΑΡΙΣΤΟΚΛΗΣ (Rutter 2001, no. 1041). Courtesy of MArTA.

Concerning the circumstances of the deposition, it must be noted that a good number of 4th and 3rd-century hoards were found in Tarentum, in its surroundings, and even in further territories (Siciliano 2002; Gorini 2013). These hoards are distributed along four main axes: towards the northeast, the east, the west, and the southwest (Gorini 2013, 109–115). The Mottola hoard falls into the western axis, which encompasses another four hoards (**Fig. 2**) found in Metaponto (IGCH 1980), Pisticci (IGCH 1996), Bernalda (IGCH 1997), and Salerno (hoard of Caselle in Pittari, see: Libero Mangieri 1994; Fischer Bossert 1999, 32). Two of these hoards were buried in around 270 BC (IGCH 1980; and the hoard of Caselle in Pittari), while the ones found in Matera and its

surroundings (IGCH 1996 and IGCH 1997) are currently dated to around 235 BC. The Mottola hoard should have been closed around 240–235 BC as well, and one could wonder if the circumstances that led to the formation of these hoards were the same. Indeed, a recent reassessment of the coin hoards found in the territory of Tarentum outlined that they can be grouped into three clusters corresponding to distinct chronological periods and distribution patterns (Sarcinelli 2020, 121–122):

– First quarter of the 3rd century BC: the hoards are concentrated in Tarentum and the southwestern area of the city.
– Second quarter of the 3rd century BC: the hoards are distributed around Tarentum and along the axis connecting it to the Adriatic, perhaps linked to the period of uncertainty associated with Rome's latest military campaigns against the indigenous Messapii.
– Third and fourth quarters of the 3rd century BC: increase in hoards along the same axes; presence of hoards also in the southernmost tip of the region.

The two hoards buried around 270 BC seem to fall into the second group, and thus they could have been buried at a time of uncertainty linked to clashes between Roman troops and indigenous populations. The situation appears more uncertain for the hoards buried in around 240 BC – a moment that falls between the second and third group, at a time when no specific circumstances are known that could have prompted their creation. For this reason, it has been suggested that the hoards of the second part of the 3rd century BC were buried later, during the period of uncertainty due to the conflict between Rome and Hannibal (Sarcinelli 2020, 122) – a hypothesis that seems somehow strengthened by the apparent homogeneity of the coins of IGCH 1993. This suggests a sudden withdrawal from circulation of all the pieces, and thus some sort of emergency circumstance.

**IGCH 1993 Catalogue**

**AG, nomos, 272–240 BC, HN Italy 1020**
**Obv.: Horseman crowning horse l.; below APIΣTIΣ, anchor.**
**Rev.: TAPAΣ dolphin rider l. holding Nike and distaff.**

1. 6.37 g; 19.87 mm
   Obv.: APIΣTIΣ / Rev.: TAPAΣ

**AG, nomos, 272–240 BC, HN Italy 1026**
**Obv.: Horseman crowning horse l.; behind: EY below: ⊦IΣTIAP.**
**Rev.: TAPAΣ dolphin rider l. holding Nike and a trident. Behind: bunch of grapes.**

2. 6.41 g; 20.01 mm
   Obv.: [⊦I]ΣTIAP / Rev.: [TA]PAΣ

3. 6.39 g; 19.14 mm
   Obv.: [⊦I]ΣTIAP / Rev.: [TA]PA[Σ]

4. 6.34 g; 18.46 mm
   Obv.: ⊦IΣTIAP / Rev.: TAPAΣ

5. 6.39 g; 19.97 mm

Obv.: ΗΙΣΤΙΑΡ / Rev.: [Τ]ΑΡΑΣ

**AG, nomos, 272–240 BC, HN Italy 1025**
**Obv.: Horseman crowning horse l.; behind: ΣΥ, below: ΛΥΚΙΝΟΣ.**
**Rev.: ΤΑΡΑΣ dolphin rider l. with chlamys on his outstretched arm and trident; at r.: owl.**

6. 6.81 g; 18.94 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑΣ

7. 6.72 g; 19.23 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑΣ

8. 6.67 g; 18.81 mm
Obv.: ΛΥ[ΚΙΝΟΣ] / Rev.: ΤΑΡΑ[Σ]

9. 6.63 g; 18.94 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑΣ

10. 6.64 g; 19.78 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑΣ

11. 6.65 g; 19.6 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑΣ

12. 6.63 g; 19.6 mm
Obv.: [Λ]ΥΚ[ΙΝΟΣ] / Rev.: ΤΑΡΑΣ

13. 6.62 g; 19.19 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑΣ

14. 6.57 g; 20.74 mm
Obv.: ΛΥΚΙΝΟ[Σ] / Rev.: ΤΑΡΑΣ

15. 6.55 g; 18.29 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑΣ

16. 6.51 g; 22.37 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑΣ

17. 6.48 g; 20.94 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: [ΤΑΡΑΣ]

18. 6.5 g; 19.23 mm
Obv.: ΛΥΚΙ[ΝΟΣ] / Rev.: ΤΑΡΑΣ

19. 6.46 g; 19.64 mm
Obv.: ΛΥΚΙ[ΝΟΣ] / Rev.: ΤΑΡΑ[Σ]

20. 6.45 g; 20.81 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: [ΤΑΡΑΣ]

21. 6.46 g; 19.82 mm
Obv.: ΛΥΚ[ΙΝΟ]Σ / Rev.: ΤΑΡΑΣ

22. 6.48 g; 21.06 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑΣ

23. 6. 44 g; 20.64 mm
Obv.: ΛΥΚΙΝ[ΟΣ] / Rev.: ΤΑΡΑΣ

24. 6.41 g; 20.25 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: [ΤΑΡΑΣ]

25. 6.41 g; 19.67 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑΣ

26. 6.33 g; 19.12 mm
Obv.: ΛΥΚΙ[ΝΟΣ] / Rev.: [ΤΑΡΑΣ]

27. 6.38 g; 19.18 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡ[ΑΣ]

28. 6.33 g; 20.48 mm
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑΣ

29. 6.36 g; 19.94 mm * (**Fig. 6**)
Obv.: ΛΥΚΙΝΟΣ / Rev.: ΤΑΡΑ[Σ]

**AG, nomos, 272–240 BC, HN Italy 1024**
**Obv.: Horseman crowning horse l.; behind: ΔΙ, below: ΦΙΛΩΤΑΣ.**
**Rev.: ΤΑΡΑΣ dolphin rider l., holding kantharos and distaff; behind: cock.**

30. 6.57 g; 19.48 mm
Obv.: ΦΙΛΩΤΑΣ / Rev.: ΤΑΡΑΣ

31. 6.52 g; 19.84 mm
Obv.: ΦΙΛΩΤΑΣ / Rev.: ΤΑΡΑΣ

32. 6.49 g; 21.15 mm
Obv.: ΦΙΛΩΤΑΣ / Rev.: ΤΑΡΑΣ

33. 6.44 g; 20.22 mm
Obv.: ΦΙΛΩΤΑΣ / Rev.: ΤΑΡΑΣ

**AG, nomos, 272–240 BC, HN Italy 1028**
**Obv.: Horseman crowning horse r.; below: ΑΓΑΘΑΡΧΟΣ.**
**Rev.: ΤΑΡΑΣ dolphin rider l., holding kantharos and cornucopia; behind: torch.**

34. 6.69 g; 21.66 mm
Obv.: [ΑΓΑΘΑΡΧΟΣ] / Rev.: ΤΑΡΑΣ

35. 6.57 g; 19.36 mm
Obv.: [Α]Γ[ΑΘΑΡΧΟΣ] / Rev.: [ΤΑ]Ρ[ΑΣ]

36. 6.53 g; 19.99 mm
Obv.: ΑΓΑΘΑΡΧΟΣ / Rev.: ΤΑΡΑΣ

37. 6.51 g; 19.06 mm
Obv.: ΑΓΑΘΑΡΧΟΣ / Rev.: ΤΑΡΑ[Σ]

38. 6.42 g; 20.16 mm
Obv.: ΑΓΑΘ[ΑΡΧΟΣ] / Rev.: ΤΑΡΑΣ

**AG, nomos, 272–240 BC, HN Italy 1029**
**Obv.: Horseman crowning horse r.; behind: ΦΙ, below: ΖΩΠΥΡΟ[Σ].**
**Rev.: ΤΑΡΑΣ dolphin rider l., holding cornucopia and trident; behind: bee.**

39. 19.5 g; 6.58 mm
Obv.: ΖΩΠΥΡΟ[Σ] / Rev.: ΤΑΡΑ[Σ]

40. 18.7 g; 6.56 mm
Obv.: [ΖΩΠΥΡΟΣ] / Rev.: ΤΑΡ[ΑΣ]

41. 6.5 g; 19.99 mm
Obv.: ΖΩΠΥΡΟ[Σ] / Rev.: ΤΑΡ[ΑΣ]

**AG, nomos, 272–240 BC, HN Italy 1030**
**Obv.: Horseman crowning horse r.; below: ΛΕΩΝ, lion advancing l.**
**Rev.: ΤΑΡΑΣ dolphin rider l., holding bunch of grapes and trident; behind: monogram.**

42. 6.42 g; 21.54 mm
Obv.: ΛΕΩΝ / Rev.: [ΤΑΡΑΣ]

43. 6.37 g; 20.53 mm
Obv.: ΛΕ[ΩΝ] / Rev.: [ΤΑΡΑΣ]

**AG, nomos, 272–240 BC, HN Italy 1031**
**Obv.: Horseman crowning horse r.; behind: monogram; below: ΚΥ[ΝΩΝ], mask.**
**Rev.: ΤΑΡΑΣ dolphin rider l. holding kantharos.**

44. 6.6 g; 20.23 mm
Obv.: ΚΥ[ΝΩΝ] / Rev.: [ΤΑ]ΡΑΣ

**AG, nomos, 272–240 BC, HN Italy 1032**
**Obv.: Horseman crowning horse r.; behind: ΕΥ; below ΞΕΝΕΑΣ.**
**Rev.: ΤΑΡΑΣ dolphin rider l. holding rhyton and trident; behind: grain ear.**

45. 6.57 g; 20.76 mm
Obv.: ΞΕΝΕ[ΑΣ] / Rev.: ΤΑΡΑΣ

**AG, nomos, 272–240 BC, HN Italy 1036**
**Obv.: Horseman crowning horse r.; below: ΦΙΛΙCΚΟC.**
**Rev.: ΤΑΡΑΣ dolphin rider l. holding kantharos and trident; below: tripod.**

46. 6.53 g; 19.89 mm
Obv.: ΦΙΛΙCΚΟC / Rev.: ΤΑΡΑΣ

**AG, nomos, 270–242 BC, HN Italy 1041**
**Obv.: Horse stepping r. crowned by rider; above: Nike crowns the rider; below: ΑΡΙΣ[ΤΟΚΡΑΤΗΣ].**
**Rev.: ΤΑΡΑΣ dolphin rider l., holding kantharos and trident; at r.: ΠΙ; at l.: herm.**

47. 6.63 g; 19.89 mm
Obv.: ΑΡΙΣ[ΤΟΚΡΑΤΗΣ] / Rev.: [ΤΑΡΑΣ]

48. 6.56 g; 17.88 mm
Obv.: ΑΡΙΣΤΟΚΡΑΤΗΣ / Rev.: [ΤΑΡΑΣ]

49. 6.54 g; 20.09 mm
Obv.: ΑΡΙΣΤΟΚΡΑΤΗΣ / Rev.: [Τ]ΑΡΑΣ

50. 6.48 g; 19.14 mm
Obv.: ΑΡΙΣΤΟΚΡΑ[ΤΗΣ] / Rev.: ΤΑΡΑ[Σ]

51. 6.44 g; 18.39 mm
Obv.: ΑΡΙΣΤΟΚΡΑΤΗΣ / Rev.: [ΤΑΡΑΣ]

52. 6.36 g; 20.32 mm
Obv.: ΑΡΙΣΤΟΚΡΑΤΗ[Σ] / Rev.: ΤΑΡΑΣ

**AG, nomos, 272–240 BC, HN Italy 1043**
**Obv.: Horseman riding r., crowned by Nike flying behind him; at r.: ΕΥ, below: ΔΑΜΟΚΡ[ΙΤΟΣ].**
**Rev.: ΤΑΡΑΣ dolphin rider r., holding trident and cornucopia; at l.: monogram.**

53. 6.53 g; 19.37 mm
Obv.: ΔΑΜΟΚΡ[ΙΤΟΣ] / Rev.: [ΤΑΡΑΣ]

**AG, nomos, 272–240 BC, HN Italy 1035**
**Obv.: Horseman riding r., at r.: Ꞥ, below: ΦΙΛΗΜΕΝΟΣ.**
**Rev.: ΤΑΡΑΣ dolphin rider r., holding tripod and trident; behind: bucranium.**

54. 6.22 g; 20.08 mm
Obv.: [Ꞥ]; [ΦΙΛΗΕΜΕΝΟΣ] / Rev.: ΤΑΡ[ΑΣ]

**AG, nomos, 272–240 BC, HN Italy 1037**
**Obv.: Horseman riding r. holding shield and spear; below: ꞤΗΡΑΚΛΗΤΟΣ.**
**Rev.: ΤΑΡΑΣ dolphin rider l. holding flower and cornucopia; behind: monogram and thymiaterion.**

55. 6.73 g; 19.31 mm
Obv.: ꞤΗΡΑΚΛ[Η]ΤΟΣ / Rev.: [ΤΑΡΑΣ]

56. 6.69 g; 19.15 mm
Obv.: [ꞤΗΡΑΚΛΗΤΟΣ] / Rev.: [Τ]ΑΡΑΣ

57. 6.50 g; 20 mm
Obv.: [ꞤΗΡΑΚΛΗΤΟΣ] / Rev.: ΤΑΡΑΣ

58. 6.44 g; 18.25 mm
Obv.: [ꞤΗΡΑΚΛΗΤΟΣ] / Rev.: ΤΑΡΑΣ

59. 6.40 g; 21.01 mm
Obv.: ꞤΗΡΑ[Κ]Λ[ΗΤΟΣ] / Rev.: [Τ]ΑΡΑΣ

60. 6.33 g; 19.13 mm
Obv.: ꞤΗΡΑΚΛ[ΗΤΟΣ] / Rev.: ΤΑΡΑ[Σ]

**AG, nomos, 272–240 BC, HN Italy 1038**
**Obv.: Horseman galloping r. holding shield and spear; at l.: ΔΙ, below: ΑΠΟΛΛΩΝΙΟΣ.**
**Rev.: ΤΑΡΑΣ dolphin rider l., holding trident, crowned by Nike flying r.; below: waves.**

61. 6.49 g; 20.56 mm
Obv.: ΑΠ[ΟΛΛΩΝΙΟΣ] / Rev.: ΤΑΡΑΣ

62. 6.39 g; 21.16 mm
Obv.: [ΑΠΟΛΛΩΝΙΟΣ] / Rev.: [ΤΑΡΑΣ]

**AG, nomos, 272–240 BC, HN Italy 1039**
**Obv.: Horseman galloping r. holding shield and spear; at l.: ΘΙ, below. ΑΡΙΣΤΟΚ.**
**Rev.: ΤΑΡΑΣ dolphin rider l., holding trident and crowned by Nike flying r.; below: rudder.**

63. 6.37 g; 18.6 mm
Obv.: ΑΡΙΣΤ[ΟΚ] / Rev.: ΤΑΡΑ[Σ]

**AG, nomos, 272–240 BC, HN Italy 1038**
**Obv.: Horseman galloping r. holding shield and spear; at l.: ΔΙ, below: ΑΠΟΛΛΩΝΙΟΣ.**
**Rev.: ΤΑΡΑΣ dolphin rider l., holding trident, crowned by Nike flying r.; below: waves.**

64. 6.37 g; 19.44 mm
Obv.: [ΔΙ ]; [ΑΠΟΛΛΩΝΙΟΣ] / Rev.: [ΤΑΡ]ΑΣ

65. 6.34 g; 19.38 mm
Obv.: [ΑΠΟΛΛΩΝΙΟΣ] / Rev.: ΤΑΡΑΣ

**AG, nomos, 272–240 BC, HN Italy 1039**
**Obv.: Horseman galloping r. holding shield and spear; at l.: ΘΙ, below. ΑΡΙΣΤΟΚ.**
**Rev.: ΤΑΡΑΣ dolphin rider l., holding trident and crowned by Nike flying r.; below: rudder.**

66. 6.60 g; 18.83 mm
Obv.: ΑΡΙ[ΣΤΟΚ] / Rev.: [ΤΑΡΑΣ]

67. 6.50 g; 20.33 mm
Obv.: [ΘΙ]; [ΑΡΙΣΤΟΚ] / Rev.: [ΤΑΡΑΣ]

68. 6.41 g; 21.38 mm
Obv.: [ΘΙ]; [ΑΡΙΣΤΟΚ] / Rev.: [ΤΑΡΑΣ]

69. 6.26 g; 21.45 mm
Obv.: [ΘΙ]; [ΑΡΙΣΤΟΚ] / Rev.: [ΤΑΡΑΣ]

**AG, nomos, 272–240 BC, HN Italy 1040**
**Obv.: Cuirassed horseman, holding javelin, galloping r.; below: ΗΙΠΠΩΔΑ.**
**Rev.: ΤΑΡΑΣ dolphin rider l., holding kantharos and distaff; at r.: ΔΙ and amphora.**

70. 6.50 g; 21.14 mm

Obv.: ⊦ΙΠΠΩΔ[Α] / Rev.: [ΤΑΡΑΣ]

71. 6.49 g; 19.23 mm
Obv.: ⊦ΙΠΠΩΔ[Α] / Rev.: [ΤΑΡΑΣ]

**AG, nomos, 272–240 BC, HN Italy 1033**
**Obv.: Horseman holding shield and two spears, galloping r.; at l.: ΔΙ, below: ΑΡΙΣΤΟΚΛΗΣ.**
**Rev.: ΤΑΡΑΣ dolphin rider l., holding kantharos and trident; at r.: head of nymph.**

72. 6.77 g; 19.81 mm
Obv.: [ΑΡΙΣΤΟΚΛΗΣ] / Rev.: ΤΑΡΑ[Σ]

73. 6.69 g; 19.57 mm
Obv.: Α[ΡΙΣΤΟΚΛΗΣ] / Rev.: ΤΑΡΑ[Σ]

74. 6.67 g; 18.82 mm
Obv.: ΑΡΙΣΤ[ΟΚΛΗΣ] / Rev.: ΤΑ[ΡΑΣ]

75. 6.67 g; 19.04 mm
Obv.: [ΑΡΙΣΤΟΚΛΗΣ] / Rev.: ΤΑΡΑΣ

76. 6.63 g; 18.85 mm
Obv.: ΑΡΙΣ[ΤΟΚΛΗΣ] / Rev.: [ΤΑ]ΡΑΣ

77. 6.60 g; 19.22 mm
Obv.: ΑΡ[ΙΣΤΟΚΛΗΣ] / Rev.: ΤΑΡΑ[Σ]

78. 6.58 g; 19.92 mm
Obv.: ΑΡ[ΙΣΤΟΚΛΗΣ] / Rev.: ΤΑΡ[ΑΣ]

79. 6.53 g; 19.33 mm
Obv.: ΑΡΙΣΤΟ[ΚΛΗΣ] / Rev.: ΤΑΡΑΣ

80. 6.53 g; 19.55 mm
Obv.: [Δ]Ι; Α[ΡΙΣΤΟΚΛΗΣ] / Rev.: [ΤΑΡΑΣ]

81. 6.53 g; 19.52 mm
Obv.: ΑΡΙ[ΣΤΟΚΛΗΣ] / Rev.: ΤΑΡΑ[Σ]

82. 6.52 g; 19.55 mm
Obv.: ΑΡΙΣΤΟΚΛΗΣ / Rev.: ΤΑΡ[ΑΣ]

83. 6.51 g; 19.56 mm
Obv.: [ΑΡΙΣΤΟΚΛΗΣ] / Rev.: ΤΑΡ[ΑΣ]

84. 6.50 g; 20.16 mm
Obv.: [ΑΡΙΣΤΟΚΛΗΣ] / Rev.: ΤΑΡ[ΑΣ]

85. 6.48 g; 19.04 mm
Obv.: [Δ]Ι; [ΑΡΙΣΤΟΚΛΗΣ] / Rev.: [Τ]ΑΡ[ΑΣ]

86. 6.48 g; 20.11 mm
Obv.: ΑΡ[ΙΣΤΟΚΛΗΣ] / Rev.: [ΤΑ]ΡΑ[Σ]

87. 6.48 g; 19.73 mm * (**Fig. 7**)
Obv.: ΑΡΙΣΤΟΚΛΗΣ / Rev.: ΤΑ[ΡΑΣ]

88. 6.48 g; 19.08 mm
Obv.: ΑΡΙΣ[Τ]Ο[ΚΛΗΣ] / Rev.: ΤΑΡ[ΑΣ]

89. 6.47 g; 19.27 mm
Obv.: ΑΡΙ[ΣΤΟΚΛΗΣ] / Rev.: ΤΑΡ[ΑΣ]

90. 6.45 g; 19.53 mm
Obv.: [ΑΡΙΣΤΟΚΛΗΣ] / Rev.: ΤΑΡΑΣ

91. 6.44 g; 19.47 mm
Obv.: ΑΡ[ΙΣΤΟΚΛΗΣ] / Rev.: ΤΑΡΑ[Σ]

92. 6.42 g; 18.84 mm
Obv.: ΑΡ[ΙΣΤΟΚΛΗΣ] / Rev.: ΤΑΡΑ[Σ]

93. 6.42 g; 19.59 mm
Obv.: ΑΡΙΣΤΟΚΛ[ΗΣ] / Rev.: ΤΑΡΑ[Σ]

94. 6.28 g; 19.43 mm
Obv.: ΑΡΙΣΤΟΚΛ[ΗΣ] / Rev.: ΤΑΡΑ[Σ]

95. 6.21 g; 19.26 mm
Obv.: ΑΡΙΣΤΟΚΛΗΣ / Rev.: ΤΑΡΑΣ

96. 6.19 g; 18.18 mm
Obv.: ΑΡΙΣΤΟΚΛΗΣ / Rev.: ΤΑΡΑΣ

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## Bibliography

Burnett, A., 2005. La documentazione numismatica, in: Stazio, A., Ceccoli, S. (eds.), Tramonto della Magna Grecia. Atti del XLIV Convegno di Studi Sulla Magna Grecia. Taranto, 161–178.

Cantilena, R., 2013. Considerazioni sui „cavalieri" di Taranto di III a.C., in: IV Congresso Nazionale di Numismatica. La monetazione di Taranto. Le monete degli Ostrogoti e Longobardi in Italia. Bari, 31–52.

Carroccio, B., 2011. Le iconografie monetali in Messapia e il "mistero" Taras, in: Colucci, G. (ed.), Le monete della Messapia. La monetazione angioina nel Regno di Napoli. Atti del III Congresso Nazionale di Numismatica. Bari, 105–130.

Crawford, M. H, 1985. Coinage and Money under the Roman Republic. Berkeley-Los Angeles.

Dell'Aglio, A., 2013. Il Museo Nazionale Archeologico di Taranto, in: Tiné, V., Zega, L. (eds.), Archeomusei. Musei Archeologici in Italia 2001-2011. Firenze, 92–97.

Degrassi, N., 1963. Il Museo Nazionale di Taranto. Musei e Gallerie d'Italia 19, 9–27.

Evans, A. J., 1889. The Horseman of Tarentum: A Contribution Towards the Numismatic History of Great Greece. London.

Fischer-Bossert, W., 1999. Chronologie der Didrachmenprägung von Tarent, Berlin-New York.

Fischer-Bossert, W., 2013. Alcuni aggiornamenti alla cronologia dei didrammi di Taranto, in: IV Congresso Nazionale di Numismatica. La monetazione di Taranto. Le monete degli Ostrogoti e Longobardi in Italia. Bari, 13–30.

Garraffo, S., 2002. Aspetti e momenti della monetazione tarentina - trenta anni dopo, in: Stazio, A., Ceccoli, S. (eds.) Taranto e il Mediterraneo. Atti del XLI convegno di Studi sulla Magna Grecia. Taranto, 469–482.

Guzzetta, G., 1987. Brevi note sulla monetazione tarantina. Bollettino di Numismatica 8, 19–23.

Guzzo, P. G., 1990. Documentazioni ed ipotesi archeologiche per la più antica romanizzazione di Bari, Brindisi e Taranto, in: Mertens, J., Lambrechts, R. (eds.), Comunità indigene e problemi della romanizzazione nell'Italia centro-meridionale (IV-III sec. a.C.). Bruxelles-Roma, 77–88.

Historia Numorum 2001: Rutter, K., 2001. Historia Numorum Italy. London.

IGCH: Thompson, M., Mørkholm O., Kraay, C.M. (eds.), 1973. An Inventory of Greek Coin Hoards. New York.

Jenkins, G. K., 1979. A Tarentine Footnote, in: Mørkholm O. Waggoner, N. (eds.), Greek Numismatics and Archaeology. Essays in honor of Margaret Thompson. Wetteren, 109–114.

La Bua, V., 1988. Il Salento e i Messapi di fronte al conflitto tra Annibale e Roma, in: Uggeri, G. (ed.), Atti del II Convegno di studi sulla Puglia romana. L'età annibalica e la Puglia. Fasano, 43–69.

Libero Mangieri, G., 2012. Il tesoretto di monete rinvenuto a Taranto nel 1883 in: Taranto 1883: il medagliere prima del Museo. Le monete di Boemondo, Principe di Antiochia. Monetarij, zanattari cornuti e poveri afflitti. Taranto, 11–216.

Libero Mangieri, G., 2016. Consistenza e Ordinamento del Medagliere del Museo Archeologico Nazionale di Taranto, in: Libero Mangieri, Pennestrì 2016, 36–46.

Libero Mangieri, G., Pennestrì, S. (eds.), 2016. Museo Archeologico Nazionale di Taranto. Il Medagliere. Roma.

Lippolis, E., 1997. Fra Taranto e Roma. Società e cultura urbana in Puglia tra Annibale e l'età imperiale. Taranto.

Lombardo, M., 2016. Dopo Archita: la vicenda storica di Taranto tra IV e I secolo a .C., in: Libero Mangieri, Pennestrì 2016, 60–73.

Mattingly, H. B., 1991. The Roma/Victory Romano Didrachms and the Start of Roman Coinage in: Martini, R., Vismara, N. (eds.), Ermanno A. Arslan studia dicata. Milano, 261–290.

Perrin, B., 1916. Plutarch. Lives, Volume III: Pericles and Fabius Maximus. Nicias and Crassus.

Translated by Bernadotte Perrin. Cambridge.

Perrin, B., 1920. Plutarch. Lives, Volume IX: Demetrius and Antony. Pyrrhus and Gaius Marius. Translated by Bernadotte Perrin. Cambridge.

Quagliati, Q., 1904. Carbonara: ripostiglio di monete repubblicane d'argento. Notizie degli Scavi, 53–65.

Quagliati, Q., 1906. Tesoretto di Maruggio. Notizie degli Scavi, 215–217.

Quagliati, Q., 1930. Quattro tesoretti di monete greche rinvenuti a Carosino, Monacizzo, Mottola, Francavilla Fontana. Atti e Memorie Istituto Italiano di Numismatica, 1–98.

Quagliati, Q., 1932. Il Museo Nazionale di Taranto. Roma.

Quagliati Q., 1932b. Torchiarolo (IGCH 1915). Atti e Memorie Istituto Italiano di Numismatica, 3–13.

Rinaudo, L., 2016: La storia del Medagliere del Museo Archeologico Nazionale di Taranto documentata dall'Archivio della Soprintendenza Archeologia della Puglia. Documenti scelti, in: Libero Mangieri, Pennestrì 2016, 193–216.

Sarcinelli, G., 2020. Monete in Messapia tra Taranto e Roma. Il tesoretto di Specchia, catalogo e interpretazione, in: Degl'Innocenti, E. (ed.), Il tesoretto di Specchia al Museo Archeologico Nazionale di Taranto. Taranto e la Messapia tra IV e III secolo a.C., Foggia, 83–129.

Taliercio Mensitieri, M., 1989. La riduzione ponderale in Magna Grecia e, in particolare, gli stateri ridotti di Heraclea, di Thurii e di Crotone. Dialoghi di Archeologia s. III, 7.2, 31–52.

Tondo, L., 2016. Il Medagliere del Museo Nazionale Archeologico di Taranto e la tutela numismatica in Puglia tra Ottocento e Novecento in: Libero Mangieri, Pennestrì 2016, 15–35.

Uggeri, G., 1986. Il porto di Brindisi in età repubblicana, in: Marangio, C. (ed.), Atti del I Convegno di studi sulla Puglia romana. L'età annibalica e la Puglia. Fasano, 46–64.

Vlasto, M. P., 1930. The Late Mr. E.P. Warren Hoard of Tarentine Horsemen and Other Contributions to Tarentine Numismatics. The Numismatic Chronicle 38, 107–163.

# Parallels in the City Coinages from the Western Part of the Roman Province of Thrace (2nd–3rd Centuries AD)*

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**Abstract:** The present study is related to four Roman provincial mints in Western Thrace and, more precisely, to certain specific coin types that these cities issued. For this purpose, several different analyses have been carried out, among them a comparative one. The duration of the mints themselves has been traced; an iconographic analysis has been carried out, as well as an examination of the coinage dies.

**Keywords:** Pautalia, Serdica, Philippopolis, Nicopolis ad Nestum, Nicaea.

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The present study concentrates on four ancient cities in the western part of the province of Thrace – Serdica, Pautalia, Philippopolis, and Nicopolis ad Nestum. In the future, the study may be extended to other cities in the province.[1] The chronology of the coinage of the four cities has been traced in the present study and will be briefly presented. It is important to note that the mints did not strike continuously. The city of Nicaea in Bithynia will be frequently mentioned in this research, even though it is located in another province (**Fig. 1**).

Of the four cities, the earliest to mint was Philippopolis, from the time of Emperor Domitian. There was a noticeable increase of the coinage under Hadrian and especially under Antoninus Pius. In the time of Marcus Aurelius, the mint seems to have restricted its activity, but in the time of Commodus it was extremely active. The mint continued to function during the early Severan period, with activity attested in the 190s and towards the end of that decade. As Dilyana Boteva noted, the Philippopolis mint ceased its activity and became active again in 210 (Ботева 1997, 133). The coins of Philippopolis are also well attested in the time of Elagabalus, when the city also received the title of Neokoros.

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[1] Future studies might include Topeiros, Hadrianopolis, Augusta Traiana, etc. This work was supported by the Bulgarian Ministry of Education and Science under the National Research Programme "Young scientists and postdoctoral students -2" approved by DCM 206 / 07.04.2022.

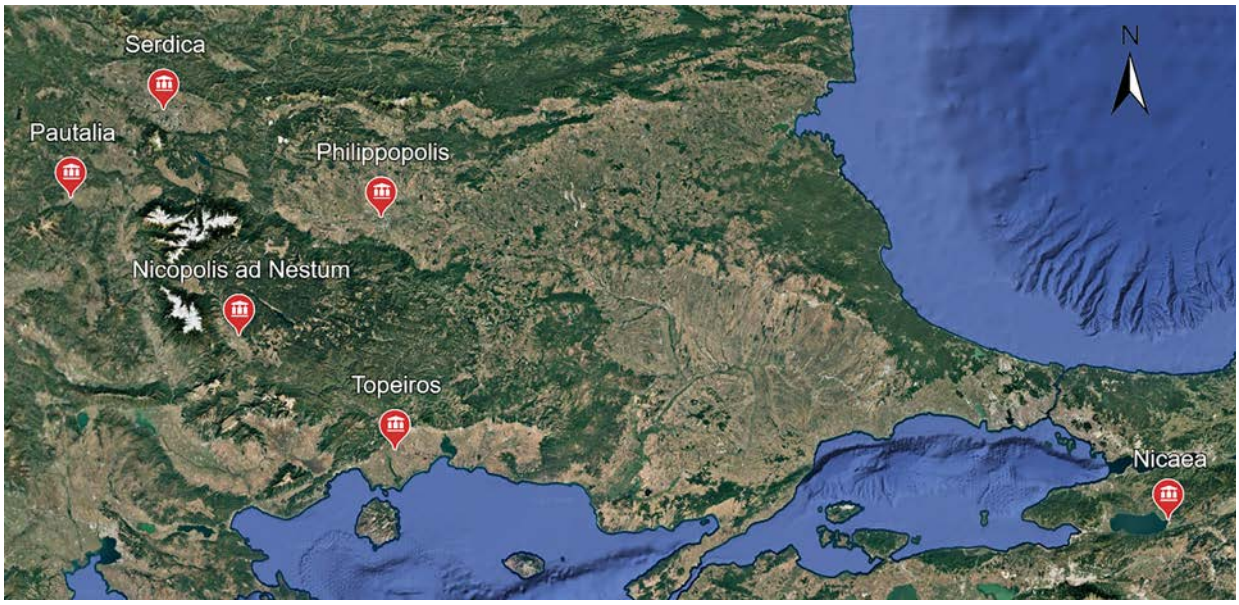


**Fig. 1.** Map of the mints discussed in the text, author N. Dimitrov.

The Pautalia mint was open in the time of Antoninus Pius and was exceptionally productive in the late reign of this emperor and during the joint rule of Marcus Aurelius and Lucius Verus. Pautalia was active in the time of Commodus and especially in the period of the early Severans. Many of the coinages in Thrace were barely active or even non-functional in the first decade of the 3rd century, but this was not the case in Pautalia – evidence of which can be seen in the coins of Geta as Caesar and also coins of Plautila, wife of Caracalla. During Caracalla's sole rule, the mint ceased its activities.

The mint of Serdica opened for the first time during the joint rule of Marcus Aurelius and Lucius Verus. In the last years of the 160s, the mint stopped producing coins and started again in the reign of the early Severans – by the mid-190s. During the end of the 2nd century, the mint probably ceased activity until the death of Septimius Severus in the February of 211. The mint of Serdica was active during the joint rule of Caracalla and Geta and especially more active during the sole reign of the elder brother. Probably after 214/215, the work of the mint ceased. It reopened under the emperor Gallienus, and already during his reign the mint changed its status from provincial to state, thus minting coins until the early 4th century.

Nicopolis ad Nestum has the most transient coinage. Its minting activity first took place in the reign of Emperor Commodus, probably in the first half of the 180s – in very limited numbers. The mint struck coins again after the death of Septimius Severus for Julia Domna, Caracalla, and Geta. Thus, the mint struck coins in 211, and in the same year or early 212 ceased its activities.

Due to the very limited coinage of Nicopolis ad Nestum, there are few examples of specific reverse types with which parallels can be made with the other three cities. One of the specific types of coins documented in each of the coinages under examination, as well as in other Thracian cities, has a reverse image depicting a female figure leaning on a torch or, in some cases, perhaps a sceptre around which is entwined a serpent (**Figs. 2–5**). In almost all cases, this figure is identified as Demeter, and in most reverse images, the cista mystica represented in front of her is also visible. In the historiography, the problem of defining the figure exists precisely in Nicopolis ad Nestum, where Holger Komnick describes the woman as Hygieia (Komnick 2003, № 46), Ivan Varbanov as Hera (Varbanov 2005, 365, № 4319), and other authors as Demeter (e.g., Мушмов 1912, № 4055; Христова 2003, 124, № 6). The difference in Nicopolis ad Nestum is the lack of cista mystica. In a valuable parallel study of the coinages of Pautalia and Philippopolis, by Ulrike Peter and Lily Grozdanova, it is clarified that Demeter with the serpent around the torch occurs in the coinages of Philippopolis, Pautalia, Serdica, Hadrianopolis, Augusta Traiana, Traianopolis, and Topeiros, as well as in Tomis and Nicopolis ad Istrum (Peter, Grozdanova 2021, 495). In each of these mints a cista mystica or fruit basket is depicted in front of Demeter.

**Fig. 2.** Nicopolis ad Nestum. Caracalla, AD 211/212, 30 mm, NAIM-BAS, inventory № 3228, Photo courtesy of NAIM, digital processing by N. Dimitrov.

**Fig. 3.** Philippopolis. Septimius Severus, AD 210/211, 29 mm, NAIM-BAS, inventory № 3497, Photo courtesy of NAIM, digital processing by N. Dimitrov.

**Fig. 4.** Pautalia. Caracalla, AD 211/212–214/215, 30 mm, NAIM-BAS, inventory № 8535, Photo courtesy of NAIM, digital processing by N. Dimitrov.

**Fig. 5.** Serdica. Caracalla, AD 211/212–214/215, 30 mm, Solidus Numismatik, auction 91, lot № 165, https://www.acsearch.info/search.html?id=8871010. (downloaded: 19.02.2024)

In this case, the coins of several other cities – Anchialos, Mesambria, and Nicomedia – can be examined, where similar images are found. The coin of Nicomedia is minted for Elagabalus and is very similar to the other examples with Demeter and the torch with the serpent and the cista mystica (RPC VI, 3356 – temporary). At the same time, the case is different for Anchialos (RPC VI, 628 – temporary) and Mesambria (RPC VII-2, № 1234): there, we can still speak of Demeter and not of Hygieia, but the cista mystica is missing. Unfortunately, it cannot be definitively determined that the figure on the coins of Nicopolis ad Nestum is Demeter, but more evidence certainly exists for this statement. In the case that the goddess is Hygieia or Hera, it seems to be a peculiar case only for Nicopolis ad Nestum. Regarding the chronology of the coins with Demeter and the serpent of the four cities studied, the earliest examples of this type are from Pautalia, minted for Septimius Severus and Julia Domna.[2]

The following examined reverse type represents Athena on a throne and in front of her a tree with a serpent entwined around it. This type is known in the coinage of Serdica (**Fig. 6**), Pautalia (**Fig. 7**), and Philippopolis (**Fig. 8**). Similar coins were also minted in the cities of Topeiros, Marcianopolis, Nicopolis ad Istrum, Callatis, and others. The characteristic feature is that in all of these mints, the type was struck at the earliest at the beginning of the 3rd century. Possibly the reverse type was brought to Thrace from Asia Minor, where similar images are found on coins from the time of Antonines in the city of Nicaea (RPC IV.1, 5970 – temporary). Coins with Athena on a throne are known in Pautalia from the time of the Antonines (Ruzicka 1933, № 51, 101, 207; Varbanov 2005, № 4424), but it was not until Septimius Severus and his sons that the tree with the serpent appeared on the reverse dies. In Serdica and Philippopolis, these coins were minted a few years later.

[2] The dating is established based on the portraits on the obverse dies.

**Fig. 6.** Serdica. Caracalla, AD 211/212–214/215, 30 mm, Berlin, Münzkabinett der Staatlichen Museen, 18245890. Photographs by Lutz-Jürgen Lübke (Lübke und Wiedemann), https://ikmk.smb.museum/object?id=18245890. (downloaded: 19.02.2024)

**Fig. 7.** Pautalia. Geta, AD 209–211, 29 mm, Solidus Numismatik, auction 37, lot № 60, https://pro.coinarchives.com/a/lotviewer.php?LotID=1424300&AucID=2913&Lot=60. (downloaded: 19.02.2024)

**Fig. 8.** Philippopolis. Septimius Severus, AD 210/211, 29 mm, Nomosag, obolos 3, lot № 326, https://www.nomosag.com/obolos-3/326. (downloaded: 19.02.2024)

Another specific reverse type, with parallels in Philippopolis (**Fig. 9**) and Serdica (**Fig. 10**), represents Heracles reclining on a lion. This type is not found in Pautalia and Nicopolis ad Nestum, but from Thrace it is also known in Augusta Traiana, Hadrianopolis (Юрукова 1987, 193, № 446), and the Roman colony of Deultum (Драганов 2006, 305, № 774). In Thrace the earliest coins of this type can be associated with the rule of Septimius Severus and his sons. Earlier parallels of the reverse type again come from Nicaea, minted with an obverse image of Faustina the Younger (RIC IV.1, 5530 – temporary). A similar reverse type is also found in other cities of Asia Minor, but mostly from the period after the early Severans. It can be assumed that this reverse type also came to Thrace from the city of Nicaea. Here it can be mentioned that the cult of Heracles was popular in Serdica, and this iconographic type is found on marble stone blocks that were probably part of an ancient temple.[3]

Another specific reverse type with Heracles familiar in Thrace is related to the childhood years of the hero, fighting the serpents sent by Hera. The coin type is attested in Thrace from Pautalia (**Fig. 11**), Serdica (**Fig. 12**) and others.[4] The Pautalian coins were struck several years earlier than those of Serdica. The iconographic type is also known from coins of the pre-Roman period, but

[3] During excavations of a late antique building in Serdica, fragments of large marble reliefs were found that can be linked to Dionysiac thiasos, but also to Heracles — perhaps in his role as symposiast — reclined on a lion. It is highly probable that the reliefs in question originate from the temple of Heracles/Heracles and Dionysus excavated by Stancheva and Fakov (Станчева, Фърков 1977) or from another cult building from Serdica. Probably after the destruction of the temple, the marble blocks were reused in the construction of a late antique building. Unfortunately, the reliefs in question have not yet been published. Many thanks to my colleagues from RHM-Sofia for the information.

[4] Such a coin type is also minted in the city of Traianopolis in the time of the sole rule of Caracalla, 211/212–217 https://www.acsearch.info/search.html?id=3300852.

in this case, again, there is an exact parallel with the city of Nicaea in Bithynia (RPC IV.1, 17279 – temporary). Nicaean coins with infant Heracles were minted for Marcus Aurelius and Commodus.

**Fig. 9.** Philippopolis. Caracalla, AD 210–211/212, 28 mm, Nomosag, obolos 16, lot № 510, https://www.nomosag.com/obolos-16/510. (downloaded: 19.02.2024)

**Fig. 10.** Serdica, Caracalla, AD 211, Dr. Busso Peus Nachf., Frankfurt, auction 366, year 2000, Lot № 424, (photo by Lübke & Wiedemann KG, Leonberg), https://www.acsearch.info/search.html?id=71950. (downloaded: 19.02.2024)

**Fig. 11.** Pautalia, Geta, AD 198–201, 20 mm, Roma Numismatics Limited, E-sale 56, Lot № 577, https://www.acsearch.info/search.html?id=5902969. (downloaded: 19.02.2024)

**Fig. 12.** Serdica, Caracalla, AD 211/212–214/215, 17 mm, Classical Numismatic Group, Electronic Auction 354, Lot 323, https://www.cngcoins.com/Coin.aspx?CoinID=287855. (downloaded: 19.02.2024)

As far as specific coin types are concerned, reference should be made to the Pautalian coins with Asclepius on a winged serpent (**Fig. 13**). The studied coin types supplement the research of Dr. Lily Grozdanova, who proves a connection between the city of Nicaea and Pautalia by registering a specific coin type with Asclepius on a winged serpent[5] (Grozdanova 2018, 190). Apart from the connection of Nicaea with Pautalia, there was one between Nicaea and Serdica, and the existence of epigraphic monuments supports this argument since Nicaean tombstones originate from the necropolis of Serdica (IGBulg. IV, 1955–1958).

**Fig. 13.** Pautalia, Caracalla, AD 198–205, 30 mm, Berlin, Münzkabinett der Staatlichen Museen, 18243774. Photographs by Lutz-Jürgen Lübke (Lübke und Wiedemann) https://ikmk.smb.museum/object?id=18243774. (downloaded: 19.02.2024)

[5] Such relations are also commented in my unpublished Ph.D. thesis "Religious Life in Pautalia and Serdica in the Roman Period (Comparative Analysis)", defended at Sofia University "St. Kliment Ohridski" in 2022.

The following few coin types in this study are related to Pautalia and Philippopolis and demonstrate the similarity between the two coinages and the exchange of ideas in the choice of reverse dies. As already mentioned, a comparative analysis for Pautalia and Philippopolis has been carried out by Ulrike Peter and Lily Grozdanova (Peter, Grozdanova 2021), who point out remarkable similarities between the coins depicting Hermes. One iconographic type rarely seen in the empire is that of Hermes and the infant Dionysus, a representation of the famous statue of Praxiteles (**Fig. 14**). Such a coin type is known in Thrace only from Anchialos, Philippopolis, and Pautalia. The numismatist Leon Ruzicka mentioned in the 1930s that similar statues of Hermes with the infant Dionysus probably existed in these cities (Ruzicka 1933, 516; Peter, Grozdanova 2021, 500). A further parallel in the coinage of the two cities can be seen in a coin type with Hermes in reverse view (**Fig. 15**). The image shows Hermes facing to the right, with the view from the back, the mantle descending from the left shoulder, and with the right hand the god holds a purse (Peter, Grozdanova 2021, 500). Both these cities began issuing the coin type during the rule of Commodus, and it is hard to tell which was earlier. Other specific depictions of Hermes – those with the god riding a ram – are typical of Thrace and occur not only on coins but also in stone reliefs. Comparing the coins from Pautalia (**Fig. 16**) and Philippopolis (**Fig. 17**), it is clear that the Pautalia coins were minted several years earlier, with an obverse image of Geta as Caesar with the prenomen Lucius, while in the Philippopolis coins, Geta is already Augustus. The historiography suggests that the iconography of Hermes on a ram is specific to Thrace and that its origin may be local Thracian (Драганов 2019, 13), but this idea should be treated with caution, since depictions on red-figure pottery of the god riding a ram are known from Classical Greece.

**Fig. 14.** Pautalia, Caracalla, AD 202–204, 29 mm, Berlin, Münzkabinett der Staatlichen Museen, 18243760. Photographs by Lutz-Jürgen Lübke (Lübke und Wiedemann) https://ikmk.smb.museum/object?id=18243760. (downloaded: 19.02.2024)

**Fig. 15.** Pautalia, Commodus, AD 187–192, 17 mm, Berlin, Münzkabinett der Staatlichen Museen, 18243652. Photographs by Lutz-Jürgen Lübke (Lübke und Wiedemann) https://ikmk.smb.museum/object?id=18243652. (downloaded: 19.02.2024)

**Fig. 16.** Pautalia, Geta, AD 198–201, 19 mm, Berlin, Münzkabinett der Staatlichen Museen, 18244479. Photographs by Lutz-Jürgen Lübke (Lübke und Wiedemann) https://ikmk.smb.museum/object?id=18244479. (downloaded: 19.02.2024)

**Fig. 17.** Philippopolis, Geta, AD 210–211, 19 mm, Nomosag, obolos 28, lot № 436, https://www.nomosag.com/obolos-28/436. (downloaded: 19.02.2024)

The last studied example are coins bearing the region's riches. The analysis of the obverse dies allows us to assume that the coin type in Philippopolis appeared several years later (**Fig. 18**). In the case of Philippopolis, the river god Hebros and few genii performing a particular activity are represented (Колев 1968, 95; Peter, Grozdanova 2021, 491–506; Varbanov 2019, 81, № XIII.55.1). More clarity in the iconography is provided by the Pautalian coins, of which several different reverse dies with similar iconography are known (Ruzicka 1933, № 473, 634; Колев 1968, 100, обр. 5; Varbanov 2005, № 4922, 5174; Grigorova-Gencheva 2011, 709–711, Figs. 1–2) – few with the river god, and some with a female figure (**Fig. 19**). Some of the Pautalian coins with the region's riches are certainly earlier than the Philippopolis ones. This proves that the coinage of Pautalia influenced that of Philippopolis through the popularisation of the specific reverse type, which led to its later issue in the city of Hebros. The female figure on the Pautalia coins can be assumed to personify a natural characteristic, incorporating in its essence a number of qualities of the Pautalian region, from which the population draws its wealth (gold, silver, wheat, grapes). These natural riches seem to have substantially strengthened the economy of Pautalia. Even in Antonine times and especially under the early Severi Pautalia flourished as an urban centre, competing with the metropolis of Philippopolis and even in some cases coming ahead of it as far as coinage was concerned.

**Fig. 18.** Philippopolis, Septimius Severus, AD 210–211, 28 mm, Nomosag, obolos 1, lot 340 - https://www.nomosag.com/obolos-1/340. (downloaded: 19.02.2024)

**Fig. 19.** Pautalia, Caracalla, AD 205–211, 30 mm, Solidus Numismatik, auction 37, Lot 59, https://www.acsearch.info/search.html?id=5545713.(downloaded: 19.02.2024)

The comparative analysis of the specific coin types from Thrace proves a certain relationship between the individual cities. The obverse and reverse dies have been studied in detail, on the basis of which the chronology of the coinage can be traced (so far there is no evidence of die sharing from these cities). The study needs to be extended in the future, but at the moment the influence of coinages from Asia Minor on those in Thrace can be clearly outlined and more precisely the relationship between the city of Nicaea and some Thracian cities, especially Pautalia and Serdica.

**Bibliography**

Ботева, Д., 1997. Долна Мизия и Тракия в римската имперска система (193-217/218 г. сл. Хр.). София, 1997.

Драганов, Б., 2019. Типология и семантика на изображенията на Хермес-Меркурий върху нумизматичните паметници от провинции Долна Мизия и Тракия. – Пловдивски исторически форум, кн. 1, 2019, 5–23.

Драганов, Д., 2006. Монетосеченето на Деултум. София, 2006.

Колев, К., 1968. Богатствата на Пловдивското поле и река Марица, отразени върху антична монета от Филипопол. – Годишник на Националния археологически музей, 6, 1968, 95–116.

Мушмов, Н., 1912. Античните монети на Балканския полуостров и монетите на българ-

ските царе. София, 1912.

Станчева, М., Фърков, Ю., 1977. Новооткрит езически храм в Сердика. – Известия на Българското историческо дружество, XXX, 1977. София, 1977, 249–277.

Христова, Н., 2003. Монетосеченето на Никополис ад Нестум. – Известия на Катедра Българска история и археология и Катедра Обща история. ЮЗУ „Неофит Рилски". Благоевград, 2003, 117–138.

Юрукова, Й., 1987. Монетосеченето на градовете в Долна Мизия и Тракия II–III в. Хадрианопол. София, 1987.

Grigorova-Gencheva, V., 2011. Deux médaillons d'Antonin le Pieux du territoire de Pautalia (Thrace) – Proceedings of the XIVth International Numismatic Congress, Glasgow 2009. Glasgow 2011, 709–714.

Grozdanova, L., 2018. Searching for Identities in the Coinage of Pautalia – Proceedings of the First International Roman and Late Antique Thrace Conference. „Cities, Territories and Identities" (Plovdiv, 3rd - 7th October 2016). Известия на Националния Археологически Институт, Том XLIV, 2018. Sofia, 2018, 187–194.

IGBulg. IV: Inscriptiones Graecae in Bulgaria repertae IV. Inscriptiones in territorio Serdicensi et in vallibus Strymonis Nestique repertae. Mihailov, G. (ed.). Serdicae, 1966.

Komnick, H., 2003. Die Münzprägung von Nicopolis ad Mestum. Griechisches Münzwerk, Berlin, 2003.

Peter, U., Grozdanova, L., 2021. Philippopolis and Pautalia - A Parallel Study of the Coinages – Thrace-Local Coinage and Regional Identity. Berlin, 2021, 491–506.

RPC: Roman Provincial Coinage online – https://rpc.ashmus.ox.ac.uk/

Ruzicka, L., 1933. Die münzen von Pautalia. Известия на българския археологически институт, VIII, 1932-1933, София, 1933, 1–216.

Varbanov, I., 2005. Greek Imperial Coins and Their Values. Vol. II, Thrace (from Abdera to Pautalia). Burgas, 2005.

Varbanov, I., 2019. The Coinage of Philippopolis. Vol. 1, Chronology of the Philippopolis coinage, Dating, Reverse types, Denominations. Burgas, 2019.

# A few Notes on the Iconography of the Idalion Coins

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**Abstract:** The topic of the present paper is the iconography of the coins of the kingdom of Idalion, one of the Cypriot city-kingdoms from the 1st millennium BC. Some of the signs have already been debated separately in the course of broader studies and more general topics. In the present paper the iconographic symbols and their parallels are under discussion, as well as their possible meaning in the context of the royal ideology.

**Keywords:** Cyprus, Numismatics, Phoenicia, Near East, Asia Minor.

BulgNJ

The island of Cyprus and its numerous kingdoms from the 1st millennium BC provide abundant numismatic information, as every state had its own monetary production. The beginning of the coinage is dated to the middle of the 6th century BC. The local Cypriot coinage first was struck in silver, with a standard based on a siglos of circa 11 grams, divided into thirds, sixths, twelfths, and so on. It differs from the Persian monetary system, and this obstacle gives an argument to some scholars to conclude the Cypriot kingdoms were partly independent from the imperial authority. Most of the coins have been inscribed with the local Cypro-Syllabic script and some with Phoenician alphabet, as Phoenicians also inhabited the island from the 9th century BC. From the 4th century BC onwards, the issues began to be inscribed with the Greek alphabet when the process of conscious rapprochement with Athens was in its height. Thus, the coinage provides information about the ethno-cultural diversity on the island (Markou 2015), as well as the political and economical interests of the kingdoms. Apart from the legends, the other prominent source of information is iconography. Every Cypriot kingdom has its own iconographical set, and sometimes it even differs from king to king in one and the same state (Markou 2015).

In the present paper, the focus is on some of the symbols of the kingdom of Idalion. The state was located inland, not far away from the copper deposits of the foothills of the Troodos Mountain. The earliest known coins are dated to the 500s BC. The monetary production did not last long, as the kingdom was subdued by the neighbouring kingdom of Kition, ca. 450 BC, which was populated exclusively with Phoenicians.

### The Sphinx

The main symbol of the short-lived Idalion coin production was the sphinx. The fantastical creature is represented seated on a hypothetical line, turned to the left, with its paw resting most likely on a flower. The body of the sphinx is leonine; the head is of a woman wearing an Egyptian wig, but without an apron; and the tail is S-shaped (Hill 1904, 100; Markou 2014, 403; Markou 2015).

The image of the sphinx does not appear as a main or secondary type among the monetary production of the other Cypriot kingdoms, but it can be found on the coins of Eastern Mediterranean poleis such as Chios, Kyzikos, Gergis, the Thraco-Macedonian region, Samothrace, and the Near Eastern Phoenician city-kingdoms of Byblos (Gebal), Samaria, and Philistia (Elayi, J. , Elayi, A. 2014, 35–36; Markou 2025, 214–215). The closest parallel is the sphinx depicted on electrum and silver coins from Chios, shown even in the same posture (Markou 2025, 215). However, the iconography of a sphinx or a winged griffi n with a paw resting on a fl ower also appears in Phoenico-Punic art—for example, on an ivory plaque from Nimrud, dating to the 8th century BC in the Metropolitan Museum (inv. no. 64.37.9), and on a plaque from Ibiza dating to the 6th century BC in the Museo Arqueológico Nacional (inv. no. 36196). The significance of the sphinx for every state is not clear. In the Phoenician city-kingdom of Byblos, J. Elayi and A. G. Elayi (2014, 34–35) suppose a decorative function but do not exclude representation of the concept of kingship and the royal power.

The sphinx is strongly connected with Egyptian culture, where it is a guardian of the pharaohs and is one of their statuary representations (Lopez-Ruiz 2021, 218). The body of the sphinx is leonine, and the head is of the king with an Egyptian wig, symbolising his superior political power (Müseler 2021). The human-headed sphinx appeared in the Near East during the 3rd millennium BC. Its image developed in the 2nd and reached its apogee during the 1st millennium BC, but in leaving Egypt and crossing "borders" the creature underwent some changes: once male and flightless, it became female, winged and with an S-shaped tail (Hassan 1949, 105; Petit 2011, 21, 44; Lopez-Ruiz 2021, 218). The fantastic creature became very popular in Syria and Canaan, and especially in the Phoenician city-kingdoms, where it was so widespread that even some scholars consider it as a "Phoenician emblem" (Petit 2011, 21; Lopez-Ruiz 2021, 219). Rather than depicting the "king" himself as in Egypt, the sphinx became a symbol of the Near Eastern goddess Ashtoreth (Hassan 1949, 110). Over time, the creature started to flank the thrones of Astarte and Baal-Hammon as well as the royal ones, most likely symbolising kings' power (Elayi, J., Elayi, A. 2014, 34–35; Müseler 2021, 82; Lopez-Ruiz 2021, 220) or the divine origin of their authority.

The image of the sphinx is in use in Cypriot art from the Late Bronze Age onwards and could be seen on vessels, ivory plaques, glyptics, funerary stelae, etc. (Petit 2011, 64). During the 6th century BC, the fantastic creature got its curved wings most likely from its Aegean counterpart (Petit 2011, 58), which by itself is of Near Eastern inspiration (Bosana-Kourou 1979; e.g. the type with curved wings could be seen in the relief from Arwad, 9th century BC, Paris, Musée du Louvre, cat. 130). The "Cypriot" sphinx synthesises local, Near Eastern and Western artistic traditions (Markou 2025, 216).

### The lotus flower

The lotus flower, which appears on the reverse of the Idalion coins, is represented on two spiral tendrils (Hill 1904, 100; Petit 2011, fig. 24; Markou 2014, 403; 2015). The flower is attested in the iconographic set of the other Cypriot kingdoms (Markou 2014, 403) as well as on the coins of the neighbouring Phoenician city-kingdom of Byblos (Elayi, J., Elayi, A. 2014, 27).

The lotus is closely associated with Egyptian culture. It is the flower from which the god Re was born and was sacred to the god Nefertum. The lotus is a symbol of rebirth and eternal life. Its iconography and symbolism spread throughout Mesopotamia, Syria, and the Phoenician city-kingdoms (Lurker 1980, 76–77). The Egyptian representation of the flower is with three petals and was often depicted in a funerary context, representing the concept of regeneration. Sometimes, the flower is shown being sniffed by the deceased and their family, "a symbolic act

intended to ensure the rebirth of the soul in the afterlife" (Woolmer 2022, 133).

The iconography and symbolism of the lotus was used also in the Phoenician city-kingdoms. It adorned tombs and sarcophagi and most likely represents "the Phoenician concept of rebirth and afterlife" (Woolmer 2022, 133-4). The flower became a common symbol in Phoenician and Punic art, and its representation was a simplification of the Assyrian type, which has a nine-part corolla. The "Phoenician lotus" is represented with two lateral and a few inner petals on a schematic calyx. This type became common in Cyprus as well (Gjerstad 1948, 290–291, 302).

In Cypriot art, the lotus flower appears as a common motif in the so-called lotus columns associated with the Phoenician art, on ivory plaques, as a decoration on bronze and ceramic bowl handles, as pendatives on silver and gold jewellery, as a representation on pottery, etc. (Coldstream 1990, 56, 58). The flower is depicted in the hands and sniffed by the Great Goddess like on the Cypro-Phoenician bronze bowl from Idalion (Metropolitan Museum, no. 74.51.5700). Similarly, it is held and smelled by a sphinx as on the "Hubbard" amphora, or simply placed next to the creature (Coldstream 1990, 56, 58). It is therefore associated with the Cypriot goddess, known to the Greeks as Aphrodite (Markou 2025, 218).

### The astragalus

On the right side of the lotus flower on the coins appears an astragalus (Hill 1904, 100; Petit 2011, fig. 24; Markou 2014, 403; 2015). The knucklebone is attested on some of the issues of the kingdom of Chytroi (Kagan, forthcoming)[1] and the kingdom of Salamis.[2] The symbol appears as a primary or a secondary type in numerous cities in Asia Minor, on coins of Antandros in Troade, Chalcedon on the Bosphorus, etc.

The knucklebones are common in the cultures of the Near East and the Eastern Mediterranean in general. They were used in many ways as a game, weights, dice for oracles, votives, and even as a royal insignia (amulet). Playing with astragaloi is attested in various sources, both written and visual (Hom. Il. 23.88; Affanni 2008, 83-4). According to Herodotus (1.94), the game with knucklebones was invented by the Lydians in a time of a great famine and was used as a lottery for those who would remain or leave the kingdom.

Used as a symbol of luck, the astragalus could refer to dice oracles found in various areas in the Eastern Mediterranean, the Near East, and Asia Minor (Markou 2014, 403; Müseler 2021, 105). The throwing of knucklebones was a less complex and much cheaper method to know the future. According to Pausanias (7.25.10) the astragalomancy is a typical practice for sanctuaries dedicated to Heracles, but also to Apollo (Delphi), Aphrodite, and Dionysos (Marazov 2007, 73; Doyen 2021). The astragaloi were most likely also used in rituals of selection of a ruler and could be a symbol of divine protection over the chosen one (Marazov 2007, 73, 97). Thus, the appearance of knucklebones on the Idalion coins may represent royal insignia of the king Gra-, on whose coins the symbol appears.

### The ankh

The symbol of the ankh, the Egyptian symbol of life, is represented on the reverse of the earliest coins of the kingdom of Idalion. The sign became one of the most preferred representations in Cypriot kingdoms from the Cypro-Archaic II period (600–475 BC) and the Cypro-Classical period (475–310 BC). The ankh appears as the main reverse type on the early coins of Salamis as well as an additional symbol on the coins of Paphos, Marion, and Kition. The sign was used on coinages of the neighbouring areas of Caria, Cilicia, Pamphylia, and the Phoenician kingdoms of Arados and Byblos. The symbol of the ankh has been associated with the short lasting Egyptian submission of the island of Cyprus or with the Persian rule (Markou 2014, 397, 404).

[1] I would like to express my sincere thanks to J. Kagan for sharing his upcoming article with me.
[2] https://www.coinarchives.com/a/lotviewer.php?LotID=2201048&AucID=5291&Lot=262&Val=78cd95738bfe5cae4bfec71c03ddb5b1

## The symbols and their possible meaning

It is most likely that the preferred iconographic symbols were related to the royal ideology accepted as a system of ideas in which certain mytho-ritualistic concepts, epic themes, and symbols are adapted to motivate, explain, and represent the royal power and authority. The languages used to express it were verbal, visual-iconographic, and architectural-burial (Christodoulou 2016; Marazov 2018).

Since no comprehensive description of the royal ideology of the Cypriot kings has been preserved, some information could be obtained from ancient Greek authors, as well as from Cypriot epigraphy. Blessed by the gods with wealth was Kinyras of Cyprus (Pind. N. 8), the autochthonous ruler (Hom. Il. 11.20–25), to whom are attributed the foundation of the temple of Aphrodite in Paphos and the kingdom of Amathus (St. Byz. 82.9). He is the beloved one of Apollo's and Aphrodite's obedient priest (Pind. P. 2.4), who in some legendary traditions is related to Byblos (Strab. 16.2.18), and in another text to Syria and Cilicia (Apollod. Bibl. 3.14). In the inscriptions, found exclusively in Paphos, the kings declared themselves as priests of the Great Goddess/ Wasnassa as well as descendants of the god-like Kinyras (Mitford 1961, 137; Egetmeyer 2010, T. II, 732f., 735f.).

It could be concluded from these sources that kingship in Cyprus was sacred in nature, as it was in most of the Near Eastern and Eastern Mediterranean royal states. Both literary sources and the epigraphy attest that the kings were sacred servants of the Great Goddess, a concept closely related to the sacred origin of the kingship. Although there is no direct evidence of a priestly function of the kings in the other Cypriot kingdoms apart from Paphos, one may be assumed (Counts 2001, 158). For Idalion it could be concluded from the famous bronze tablet of Idalion, in which the goddess Athena is the one "who embraces Idalion" (Cabinet des Médailles, № 2297, Masson 1961, 239–244, lines 27–28). According to Papantoniou (2016), the sacralisation of the royal power could also be "seen" in the organisation of Idalion's sacred and secular spaces – the royal palace and above it the sanctuary of the goddess – as it is attested in Amathus and Vouni. This is a characteristic specific to the Near East (Hermary 2013, 95).

In Cyprus the sphinx was strongly related to the Great Goddess/Wanassa, like in the Levant, and became her symbol (Petit 2011, 79; Papantoniou 2013, 169), which could be accepted as a sign of her epiphany. Its appearance on the Idalion coins could suggest the idea of divine protection above the kings and kingdom or could represent a moment of some foundational myth. Thus, the appearance of the sphinx on the Idalion coins most likely expresses the royal ideology of the Idalion kings, the sacred servants beloved and protected by the Great Goddess "who surrounds Idalion". The lotus flower, which is usually depicted in the hands or sniffed by the goddess or by her symbolic creature – the sphinx – could be accepted as sacred to her. Its appearance on the coins may underline the sacred relation between the kings and the Wanassa.

The sign of the astragalus could be interpreted in two ways: as a royal insignia of the chosen one by the Great Goddess, or as a received oracle for the king's or kingdom's fate. As the coins on which the sign of the knucklebone appears are dated to 470–450 BC, one could speculate that it was during the turbulent times of the siege of Idalion by the Kitians and Persians, an event mentioned in the bronze tablet from Idalion (Cabinet des Médailles, № 2297; Masson 1961, 239–244). Both interpretations could be accepted as evidence of divine protection over the Idalion kings and a symbol of the sacred relation between them and the Great Goddess.

The significance of the ankh in Cypriot culture remains unclear, but as the sign refers to the royal power in Egypt, the same meaning could be assumed (Markou 2014, 404; Markou 2015) and thus related with the royal ideology – of course without knowing its exact meaning and function in Idalion.

## Conclusion

The iconographic repertoire of the coins of the kings of Idalion most likely communicate the sacred origin of their power, the divine protection over them, or some moment of their mythical

past. The symbols are the medium through which the royal authority propagated and legitimised their power and expressed their royal ideology. As the form of government in Idalion was similar to many of the kingdoms and empires in the Near East and Asia Minor, it is highly probable that their royal ideologies were identical or very akin to one another (Coldstream 1990: 59) and that borrowing iconographic symbols or being influenced by them is highly probable. Moreover, the geographical proximity of the island of Cyprus to the Near East and Asia Minor —as well as the island's submission to a few Near Eastern imperial powers like Assyria, Egypt, and Persia — facilitated the movement of people, concepts, and ideas. Thus, the iconography of the kingdom of Idalion once again mirrors the important role of Cyprus as a "middle ground", a melting pot of different cultures, religious beliefs, and artistic traditions, their adaptation and interpretation in the local culture, and even their diffusion in the Eastern Mediterranean with the mediation of the island.

**Bibliography**

Affanni, G., 2008. Astragalus Bone in Ancient Near East: Ritual Depositions in Iron Age I in Tell Afis. In: J. M. Córdoba et al. (eds.), Proceedings of the 5th International Congress on the Archaeology of the Ancient Near East, Madrid, April 3-8 2006, I. Madrid 2008, 77-92.

Bosana-Kourou, P., 1979. The sphinx in early archaic Greek Aart. https://ora.ox.ac.uk/objects/uuid:7909c709-069f-49b6-b7ab-2f9f1ce8b981/download_file?file_format=application%2Fpdf&safe_filename=602344776.pdf&type_of_work=Thesis (accessed: 05.06.2023).

Christodoulou, P., 2016. Royal Ideology in Archaic and Classical Cyprus. Kyprios Character. History, Archaeology & Numismatics of Ancient Cyprus: http://kyprioscharacter.eie.gr/en/t/A5 (accessed: 04/08/2023).

Coldstream, N., 1990. Early Iron Age (Cypro-Geometric). The Rise of the Ancient Kingdoms c. 1100–700 BC, in: Hunt, D., (ed.), Footprints in Cyprus, Trigraph Ltd, 47–64.

Counts, D., 2001. Prologomena to the study of Cypriote sculpture. Cahiers du Centre d'Etudes Chypriotes, Vol. 31, 129–181.

Doyen, Ch., 2021. L'astragale comme symbole pondéral et monétaire. https://www.researchgate.net/publication/351049501_L%27astragale_comme_symbole_ponderal_et_monetaire/ (accessed: 03/05/2023).

Egetmeyer, M., 2010. Le dialecte grec ancient de Chypre. Tome I: Grammaire. Tome II: Répertoire des inscriptiones en syllabaire chypro-grec. De Gruyter, Berlin/New York.

Elayi, J. and Elayi, A. G. 2014: A Monetary and Political History of the Phoenician City of Byblos in the Fifth and Fourth Centuries B.C.E. Penn State Univerity Press, Eisenbrauns.

Gjerstad, E. 1948: The Swedish Cyprus Expedition. Vol. IV: 2. The Cypro-geometric, Cypro-archaic and Cypro-classical Periods. Swedish Cyprus Expedition, Stockholm, 1948.

Hassan, S., 1949. The Sphinx. Its History in the Light of Recent Excavations. Government Press, Cairo.

Hill, G. F., 1904. Catalogue of the Greek Coins of Cyprus in the British Museum (BMC Cyprus).

Hermary, A., 2013. Building Power: Palaces and the Built Environment in Cyprus in the Archaic and Classical Periods. Bulletin of the American Society of Overseas Research (BASOR) 370, 83–101.

Kagan, forthcoming. Kagan, J. The Archaic and Early Classical Coinage of Cythroi (Kythrea) in Cyprus, forthcoming.

Lopez-Ruiz, C., 2021. Phoenicians and the Making of the Mediterranean. Harvard University Press.

Lurker, M., 1980. An illustrated dictionary of the Gods and Symbols of Ancient Egypt. Thames & Hudson.

Masson, O., 1961. Les inscriptiones Chypriotes Syllabiques, Paris.

Marazov, I., 2007. The game of astragaloi, the riddle, the divination (in Bulgarian). MIF12 The Ritual, NBU, Sofia, 68–101.

Marazov, I., 2018. Царска идеология и изкуство у траките. http://www.thracefoundation.org/wp-content/uploads/2018/03/Marazov_Tzarska_ideologia_BG.pdf (accessed: 05/05/2023).

Markou, E., 2014. Symbols on the Archaic and Classical Cypriot Coinage. Influences, Duration and Diffusion. First International Congress of the Anatolian Monetary History and Numismatics, 2013, Antalya - Proceedings, 397–408.

Markou, E., 2015. The coinages of the kings of Cyprus from the Archaic to the Early Hellenistic period. Kyprios Character. History, Archaeology & Numismatics of Ancient Cyprus: http://kyprioscharacter.eie.gr/en/t/AU.

Markou, E., 2025. The Royal Coinages of Kition and Idalion. A Numismatic and Historical Study (6th-4th c. BC). Meletemata, vol. 89, Athens.

Mitford, T. B., 1961. Further Contributions to the Epigraphy of Cyprus. American Journal of Archaeology, Apr., 1961, Vol. 65, No. 2, 93–151.

Müseler, W., 2021. Between Mesopotamia and Greece: Cultural influences in Cilician Coin-iconography from the late 5th to the early 4th century BC. GEPHYRA 22, 69–133.

Papantoniou, G., 2013. The 'Cypriot Goddess' at the Transition from the Bronze to the Iron Age: a 'Cypro-centric' Approach. In: A. Bernard Knapp, Jennifer M. Webb and Andrew McCarthy (eds.), J.R.B. Stewart an Archaeological Legacy, Studies in Mediterranean Archaeology, Vol. CXXXIX, Åströms förlag, Upsala, 161-174.

Papantoniou, G., 2016. Cypriot Ritual and Cult from the Bronze to the Iron Age: a Longue-durée Approach. In: John Bintliff (ed.), Journal of Greek Archaeology, Vol. I, Archaeopress, Oxford, UK, 2016, 73-108.

Petit, Th., 2011. Œdipe et le Chérubin: Les sphinx levantins, cypriotes et grecs comme gardiens d'Immortalité. Zurich Open Repository and Archive, University of Zurich.

Woolmer, M., 2022. A Short History of the Phoenicians. Revised Edition, Bloomsbury Publishing.

# DigiThrace: Digital Tool Combining Diverse Types of Sources (A Short Research Concept Presentation)

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**Abstract:** This paper presents the conceptual motivation, technical approach, and resulting capabilities of the concept of creating a unified environment for the management of historical source data. The experimental environment integrates epigraphic research workflow into the Corpus Nummorum (CN) Editor, originally designed for numismatic research. Based on and extending the CN open-access data model and freeware, the experimental work introduces full support for epigraphic objects, “Epigraphy”, as a new primary entity within the system. The backend and frontend underwent development, including database schema extensions, indexing logic, API enhancements, and the creation of dedicated editorial and search interfaces. Thus, the ‘DigiThrace’ tool, based on a domain-specific numismatic tool, aims to be a broader environment for integrating diverse source types. The results demonstrate that heterogeneous archaeological and historical data types can coexist within a unified digital research infrastructure, enabling cross-domain analysis, richer metadata modelling, and enhanced interoperability.

**Keywords:** ’DigiThrace’ tool, Corpus Nummorum (CN) Editor, multi-source-type research database.

## The Concept

There are highly developed active single-source-type research platforms (Ivanova-Anaplioti, Grozdanova 2025). Feasibly needed is a way to systematise, accumulate and analyse information through a unified multi-source-type research database. Following the principles of Linked Open Data, as well as the FAIR and CARE principles, a relational DB analytic tool[1] ‘DigiThrace’

[1] On the subsequent development stages, we are aiming to map it to an RDF database and SPARQL, consequently implementing also AI models.

for the cultural heritage of ancient Thrace started to be developed within the Project 'Measuring Ancient Thrace' (BNSF № КП-06-Н50/3 – 30.11.2020) (**Fig. 1**), under the scientific lead of Assoc. Prof. Dr. Julia Tzvetkova (Boteva, Tzvetkova, Grozdanova, 2024). The concept aimed to be fully tailored to the needs of the researchers, while also taking into consideration the needs of the students, young scholars, and even broader public interested in scientifically proven data. Its design incorporated the team's experience in the research, processing, and analysis of diverse monuments, with an additional emphasis on multilingualism since the beginning. An essential part of the endeavour was that working with our partners from Corpus Nummorum has presented us with a highly developed open-source tool based on numismatic materials, with a data model that proved highly adaptable. The experimental extension of the numismatic data model for epigraphic materials presented us with promising proof of concept, both for the quality of the CN platform and Editor (Петер 2021; Peter, Stolba 2025) (**Fig. 2**), and for the idea that combining diverse source types within a single structure is a functional and scientifically promising approach (**Fig. 3**).

**Fig. 1.** Project 'Measuring Ancient Thrace' Logo.

**Fig. 2.** Corpus Nummorum Logo.

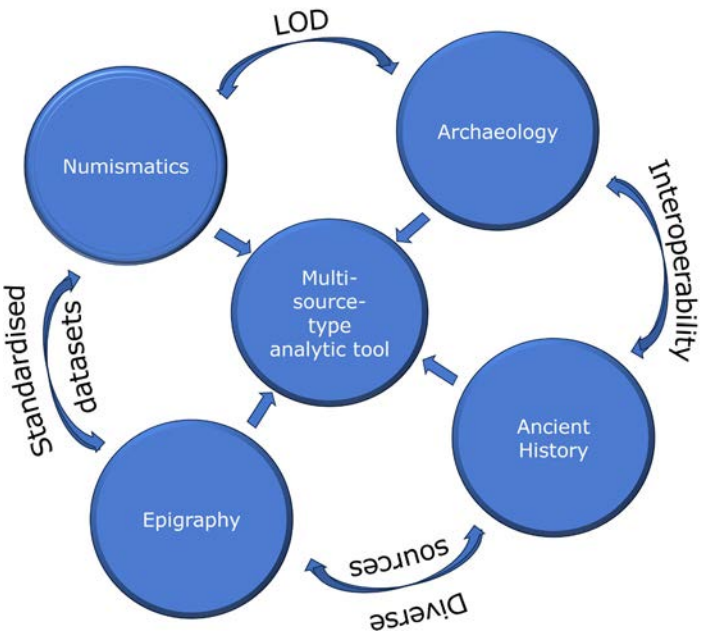


**Fig. 3.** Heterogeneus historical sources DB concept visualisation.

The project BNSF КП-06-Н80/7, 08.12.2023 "Upgrading the Historical Narrative: From *Deultum* to **DigiDeultum**", under the scientific lead of Prof. Dr. Lyudmil Vagalinski (NAIM-BAS), poses the basic question: *Has digital humanities, particularly the study of Antiquity, reached the level of synthesising new research directions, methods, and ultimately – upgraded knowledge?* The project explores whether there is a fundamental shift in the reconstruction of historical narratives by combining traditional historical and archaeological methods with digital humanities and the

archaeological sciences to study and reconsider the historical narrative of the Roman colony of Deultum (Grozdanova, forthcoming) (**Fig. 4**).

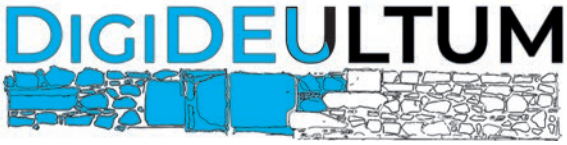


**Fig. 4.** DigiDeultum Logo.

Within the **DigiDeultum project**, we have the opportunity to test the DigiThrace tool with a particular research object, thereby strengthening coherence and collaboration with other projects and the development concept. We are working on populating the DB with both numismatic and epigraphic datasets of materials from the Roman colony of *Deultum*. The aim is to test the possibilities by simultaneously analysing diverse materials, queried with shared mechanisms to address complex questions, such as why the coinage produced by the city mint (AD 212–249) still does not seem to dominate any of the coin finds from the different areas of the colony itself. Thus, it initiates the process of building the new, upgraded historical narrative. Enabling cross-domain computational analysis by harmonising indexing, search, image handling, and linkage mechanisms across heterogeneous archaeological objects is especially important in the age of AI and its proactive implementation in research and development.

To achieve the project's goals, re-engineering parts of the CN system was needed to accommodate new entity-specific data.

### Approaching the issue methodologically

The development strategy was structured around several technical pillars.

The backend architectural extensions for epigraphic monuments were added alongside the existing ones within the CN data model and the Editor's primary entities (*coins* and *types*). Following the principles of separation of concerns, with dedicated controllers and modular handlers for select, join, where, and order-by operations the process involved: creating an epigraphy database schema with numerous associated tables; implementing parametric and ID-based request handlers tailored to epigraphy's structured metadata; extending the indexing pipeline to incorporate epigraphy-specific secondary data such as owners, inscription metadata, and monument characteristics; and enhancing support for new image types and gallery-style image collections.

Another aspect is the frontend integration in the CN Editor user interface by creating components designed to accommodate epigraphic workflows:

- Epigraphy editor sections with additional fields, such as find circumstances, preservation, etc.;
- New search capabilities supporting epigraphy-specific filters (such as monument type, inscription type, find conditions, ornamentation, etc), as well as being able to query simultaneously numismatic and epigraphic datasets;
- Dedicated display modes, including a card layout;
- Support for image galleries in addition to obverse–reverse layouts typical for coins.

Further, the editor was expanded to handle epigraphy state management, caching, list providers, and entity attributes.

Secondary entities were also added, allowing the system to support a set of new linked epigraphic entities, each with its own CRUD logic, list handlers, and UI components. These entities enrich the semantic landscape of records and the data model as a whole, enabling controlled vocabularies, structured dropdowns, and advanced filtering.

A central challenge was the harmonisation logic across different entities despite their structural

differences. The indexing logic and query-resolution strategies were enhanced to support mixed-entity parametric search while preventing inconsistent filters through additional safeguards (**Fig. 5**).

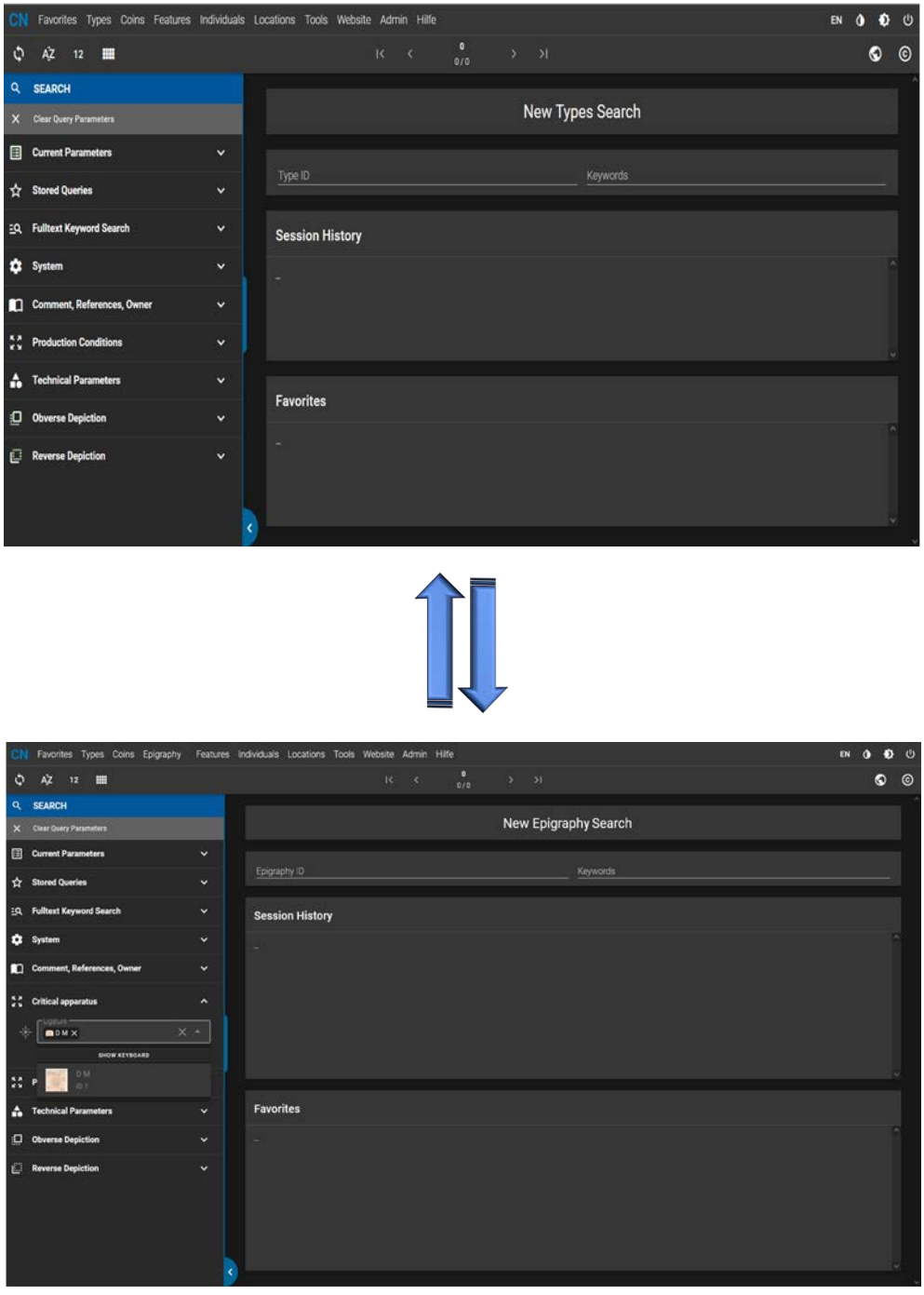


**Fig. 5.** CN Editor extended for inscriptions.

## Testing stage results

The modified CN environment, implemented by the DigiThrace tool, now integrates epigraphic and numismatic data, allowing scholars to create, edit, and publish inscription datasets using the same workflows as for coins; to conduct searches within or across different categories using consistent interface patterns; and to leverage harmonised indexing to perform broader

comparative studies.

The platform seems to effectively transform into a multi-domain archaeological editor with a coherent architecture. It follows and reflects the up-to-date practices in digital epigraphy and supports advanced cataloguing standards. The enriched indexing pipeline improves the resolution and accuracy of search results and enables cross-referencing between numismatic and epigraphic data.

The further development of the User Interface aims at providing a high-engagement usability environment for both expert and novice contributors by introducing, for example, consistent visual patterns for coins and inscriptions (**Fig. 6**).

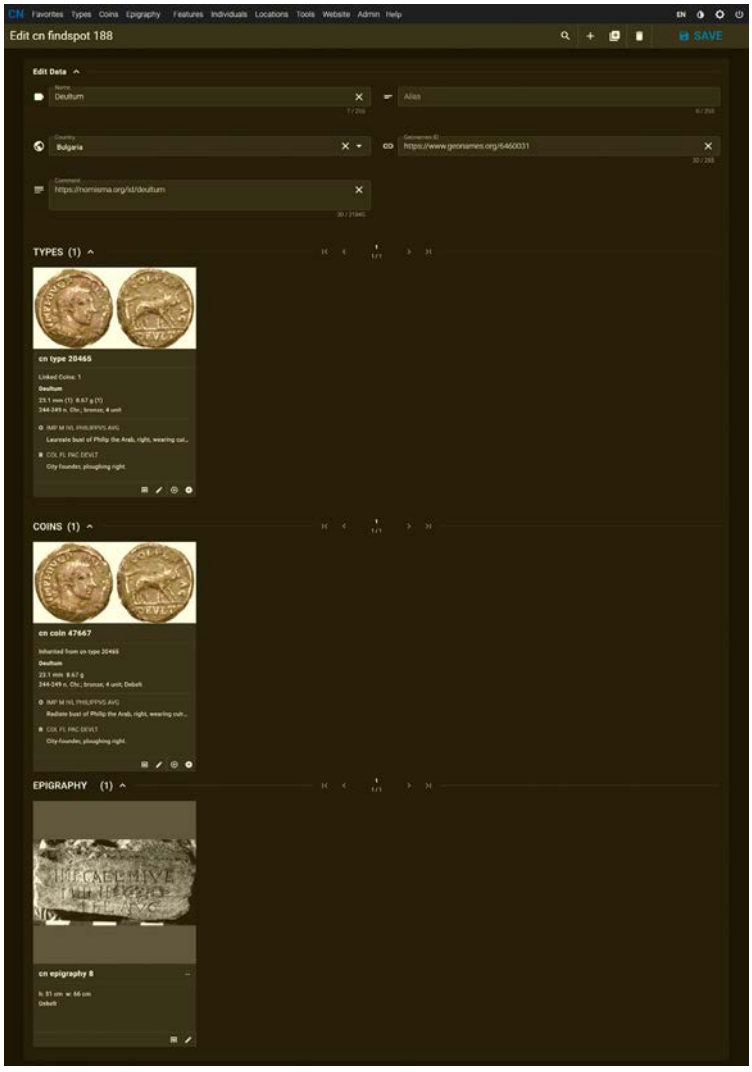


**Fig. 6. DigiDeultum** data input DB query result.

## To conclude

The development and the ongoing testing within **DigiDeultum** seem to indicate that a unified data infrastructure for heterogeneous historical sources is both feasible and advantageous. Several technical insights emerged as:

- **Modular handlers are essential** when object types have diverging metadata structures. The separation of select, join, where, and order-by logic enabled fine-grained optimisation for epigraphic workflows without breaking the numismatic functionality.
- **Unified UX does not mean identical UX**. Instead of forcing coins and epigraphy into the same form template, the editor adapts dynamically, preserving consistency while

respecting disciplinary differences.

- **Indexing is a critical integration layer**. By treating indexing as an intermediary between heterogeneous data and search interfaces, the system maintains flexibility and clarity in query outcomes.
- **Secondary entities form the semantic backbone** of epigraphic cataloguing. Without structured lists for monument types, observation types, etc., the richness of the data would be diminished (intentionally structured with an AI tool paragraph by Atanas Georgiev).

This work suggests that integrated archaeological information systems should emphasise modularity, controlled vocabularies, image abstraction layers, and strong separation of concerns between backend modules.

The intermediary results demonstrate the viability and scholarly value of integrating diverse historical source datasets within a harmonised digital environment, while also opening scientific research opportunities, and consider the possibility of implementing different types of visual, linguistic (see also Peter, Stolba 2025) or multimodal AI concepts (see also https://accs-network.com/counterfeits-info-cards-collection/).

**Bibliography**

Boteva, D., Tzvetkova, J., Grozdanova, L. 2024. Bulgarian Numismatics and the Challenges of the Digital Age. (in Bulgarian) – Bulgarian E-Journal of Archaeology 14/1, June 17 2024, 169–79.

Grozdanova, L. forthcoming. From Deultum to DigiDeultum: The Concept. In: Proceedings of the Deultum conference (December 2023). Archaeologia Bulgarica Supplements (forthcoming)

Ivanova-Anaplioti, H., Grozdanova, L., 2025. Digital Numismatics from the User Perspective. In: Bodzek, J., Bursche, A., Zapolska, A. (eds). Proceedings of the XVI International Numismatic Congress in Warsaw 2022, 297–305.

Peter, U., Stolba, V., 2025. IMAGINES NVMMORVM: Thesaurus Iconographicus Nummorum Graecorum – A New Numismatic Project in: Bulgarian Numismatic Journal, 3/2, 51–53. https://doi.org/10.5281/zenodo.17765689.

Петер, У., 2021. От Mommsen до Семантичната мрежа/Semantic Web: Перспективи пред нумизматичните изследвания в дигиталната мрежа – монетите на западното Черноморско крайбрежие онлайн, in: Delev, P., Boteva-Boyanova, D., Grozdanova, L. (eds.). JUBILAEUS VIII: Back to the Sources, 8.2, 175–192, <https://unipress.bg/jubilaeus-viii-zavrashtane-kam-izvorite-chast-ii>.

# Contact and Demarcation Patterns based on the Excavation Coins from Heraclea Sintica, season 2021

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**Abstract:** The archaeological site of Heraclea Sintica holds a strategic position between Thrace and Macedonia. Its exact location was only identified in the last two decades, thus providing new information about the contact zone between these regions. With every excavation season, it yields discoveries of all kinds with the utmost impact on historical research of the region and beyond. The historical development has therefore become much clearer due to this progress. One of the main material groups that especially uncovers economic and cultural contact is coinage. However, it bears far more facetted information as one centrally and intentionally processed media of whatever the mint authority was. The material from the 2021 excavation season represents a wide range of coinages that cover all periods. For the first time, coinage from the acropolis is also being compared to the usual material from the forum. It discloses data about the general supply in Heraclea and many other aspects of civil development. In particular, the possibility emerges to recognise patterns of demarcation reflected on the coin finds from the site.

**Keywords:** Heraclea Sintica, Coin finds, Campaign 2021, Demarcation.

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## Location and Historical Remarks

The geography of the area where Heraclea is situated is suitable for establishing a toll station. It lies directly on the Strymon River, a main vein from the Mediterranean towards Thrace (Mitrev 2015, 47–51), but just after the first mountainous range. This would be the Belasitsa Mountain (or Belles in Greek), which is quite prominent and whose ridge is still on the border between Bulgaria and Greece. To the east of the Strymon, the Sengelska Planina/Angistron continues into the Slavyanka Mountain/Orbleos. Where they meet with Belasitsa is the Rupel Pass, the place of various military actions (Гюзелев, Николов 2015, see various papers, especially about the medieval ages). Ograzhden wards to the north of Belasitsa, and, north of Slavyanka, the Pirin is protecting both from the north and the east. The only passage is in the low valleys of Strymon to both the north and south and Strumeshnica towards the west. In positioning the site of Heraclea Sintica on where the two rivers merge, the flow towards East Macedonia from the north and the alternative from the west was set under control. So, this was a notable crossroad making Heraclea Sintica one of the knots between Macedonia and Thrace in a very well-known road network (Sharankov 2017, 21–23).

Therefore, having a major site as a stop or controlling point or retreat in this area was a smart

strategic decision. We know of different tribes in the area since the earliest times, with the primary groups being the Sinti or Maedi (Delev 2014, 338–356. 349–345; Parissaki 2015, 40–43; Митрев 2012, 21–81). The territory changed its occupants quite often, however. The site has existed since the 4th century BC (Nankov 2015, 19; Митрев 2022, 37–39). We know from even later periods – for instance during the Roman Empire – that Thracians were still part of the society, as inscriptions published by N. Sharankov have proven (Sharankov 2021, 26–33). This had led to a constant struggle between societies to demarcate from one another from antiquity and through to today. Important turning points for the alliance of the settlement are several Hellenistic advancements (Вагалински 2022, 86–90), but the main uprise came with the Roman occupation after the Battle of Pydna in 168 BC and later the establishment of the Province of Macedonia, with Heraclea being part of the first *Merida* (Daubner 2018, 63). Until Thrace was officially a province, this was the outer rim of the empire despite the Sapaean client kingdom (Tačeva 1995, 459–467). However, the clearer the chronology of events becomes from the site of Heraclea as presented in the newly published volume about the excavation (Вагалински 2022, 58–61), the more complex and incomprehensible the original situation of the northern frontier and its development becomes. New interpretations will be particularly affected by the discovery of an early Roman military camp close to the settlement of Polenitsa, north of Heraclea (Alexandrova 2020, 58).

## Site and Trenches

The excavation team has been researching the site since 2007, making astonishing discoveries each year, primarily from the Roman period (Vagalinski 2020, 13–18; 2015, 89). Closely observed, the polis was located on the south side of an elevated area containing the forum below the slope (Mitrev 2015, 47–53; Вагалински 2022, 9–11). The fortified acropolis was located on the Kozhuh Hill (Вагалинск, 2022, 75). Those are the two areas where excavations have been conducted. On the acropolis, only one trench was carried out during one season in 2021. The forum was the main study area, and a large part has already been excavated, even if not to its complete chronological capacity (Вагалински 2022, 58). There are different areas with functionally differentiated facilities that were studied in meticulous detail on an individual basis by each room and porticus. These are public buildings such as a basilica, religious shrines, etc. (Вагалински 2022, 13, 50) The chronological development of the settlement has been divided into five phases (Вагалински 2022, 116–117). While there is little known from the Hellenistic period, it is certain that there was an agora and that the Mithridatic War had probably an impact on the site (Вагалински 2022, 22). The first settlement phase is attributed to the 1st century BC until the mid-1st century AD, when the agora was renovated. During the second phase – from the mid-1st century AD to the end of the 3rd century AD — the Roman forum flourished but was disturbed by attacks during the middle of the 2nd and the end of the 3rd century (Vagalinski 2017, 94). The third phase is from the end of the 3rd until the end of the 4th century AD, when the forum underwent some renovations again. The fourth phase is at the end of the 4th century until the mid-5th century, when two earthquakes destroyed much of the city. During the fifth and final phase from the mid to the end of the 5th century, at least the forum started to lose its importance.

In 2021 the site bore more than 300 coins. This large amount of material covers not only the general excavation area of the forum but the acropolis as well in contrast to the previous seasons. The total of the coins is now around 3000 and growing. The forum coins of 2021 came mainly from the rooms (R) of the West Porticus (WP) and give quite an interesting comparison between this area and the acropolis. The following areas were distinguished in the West Porticus: R1, R2, R3, R4, and R5.

## Distribution of the Coin Finds

The numismatic material that came from the area of the forum, that is the WP, comprises 205 coins. Only 3% are Hellenistic coins from before the Battle of Pydna, 17% are from the period after it, 1% are Roman Republican, 64% are Roman Imperial or Provincial, 6% are from Late Antiquity, 1% are Byzantine, and 7% are unidentified (**Fig. 1a & 2**).

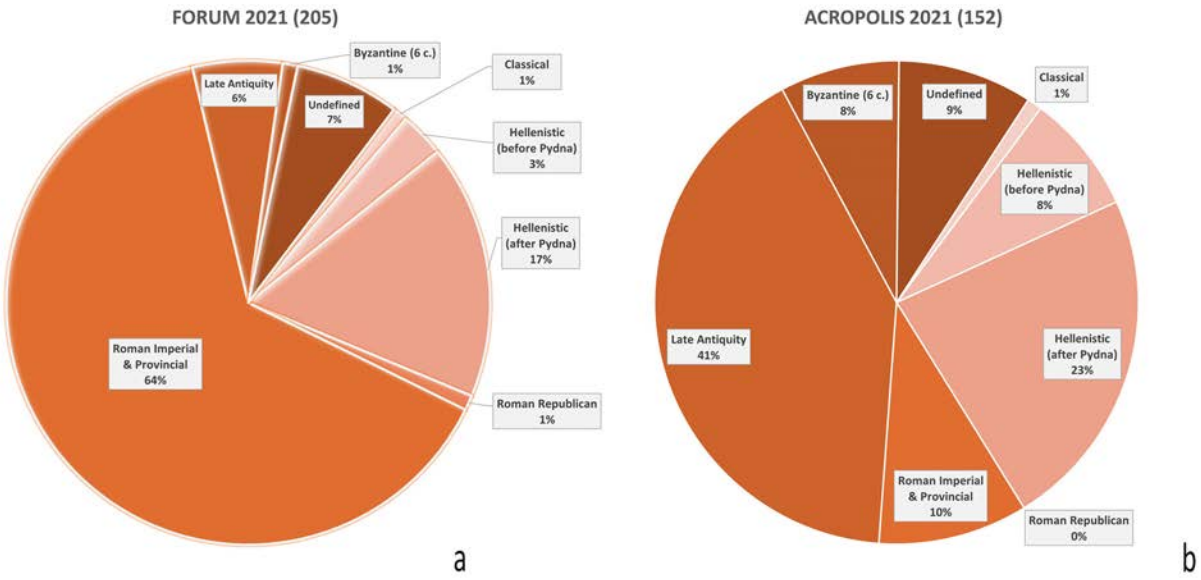


**Fig. 1.** Diagram showing the chronological ratio of the coin finds from campaign 2021: a) from the forum; b) from the acropolis.

The 152 coins from the acropolis show a different correlation. There is one presumably classical coin (Krenides?). A higher percentage occurs during the Hellenistic period – 8% before and 23% after Pydna, respectively. Only 10% are Roman, and a majority of 41% are dated to Late Antiquity, while 8% comprise early Byzantine coins (**Fig. 1b & 2**).

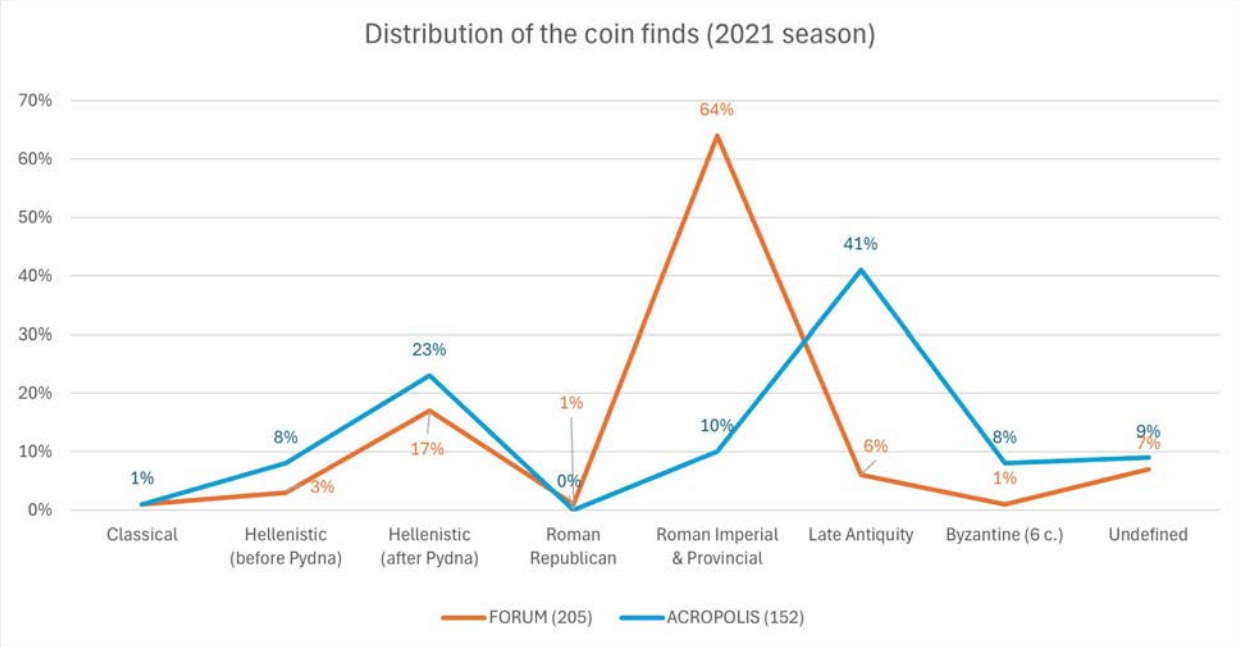


**Fig. 2.** Comparative cchronological distribution of the coin finds from the forum and the acropolis of Heraclea Sintica, campaign 2021.

The general chronological distribution of the finds – even with only selected areas of the site and from one campaign – corresponds to the site development, especially following the resettlement of the inhabitants to the acropolis after the second earthquake (Вагалински 2022, 71). Fewer finds from the late antique period of the forum in general, mark the relocation of the centre or the seeking of refuge. The larger percentage of Hellenistic material from the acropolis either implies a similar temporary situation during that time or a stronger activity in that area for other reasons that are yet to be determined (Вагалински 2022, 69).

The catalogue includes the 59 best preserved and most illustrative examples, while the complete list of finds will be included in the final publication of the coins.

## Hellenistic Period and the Roman Republic

*Forum*

The Hellenistic coins from the forum are as early as cat. no. 1 (**Fig. 3**). The latter is a type of bronze emission minted in Amphipolis or Pella under Antigonos Gonatas, depicting Athena and Pan, and dated to 277–239 BC (Gaebler 1935, 187, n. 6, pl. XXXIV n. 4). It came from the levelling debris layer in R2 of the WP and can't be seen as an indicative dating criterion. Later civic examples are represented by cat. no. 2 (**Fig. 4**), found in the balk of a trench in R1 of the WP, and cat. no. 3 (**Fig. 5**), also from the same area. These are again early issues dating from 187–31 BC (Gaebler 1935, 36, n. 43, pl. IX n. 17), both originate from Amphipolis and depict Artemis and a bull. As all specimens come from R1 and R2 of the WP, they do not provide any significant data for the strata. It is noteworthy that those types were circulating in Heraclea, as already known from a preliminary publication (Filipova, Ivanov, 2015). The Macedonian royal and civic coinage is expected from that period and is not a surprise.

From the forum originate two interesting Roman Republican specimens. The first is cat. no. 4 (**Fig. 6**), a denarius of Marcus Pletorius of the Fortuna type dated to 69 BC (RRC 405.2) which comes from R3 and the burnt floor. However, the *terminus post quem* established by other numismatic material is in the 3rd century AD (Вагалински 2022, 35). The second is cat. no. 5 (**Fig. 7**), a denarius of a Q. Caecilius Metellus Pius Scipio from 47–46 BC minted in Africa (RRC 459.1). It was found in R5, which contains two later cisterns and is also not indicative for the strata. The two specimens, however, provide information about the type of coins that entered the polis of Heraclea in the 1st century BC. Both types are found across modern Italy, France, the western Iberian Peninsula, and in Dacia. The circulation time and dispersion have made the interpretation of the findings a challenge. It was clear that Roman coinage, even if outdated, had its weight in this area.

*Acropolis*

The finds at the acropolis are far more abundant in this period, but they similarly cover the Macedonian royal bronze coinage, such as cat. no. 6 (**Fig. 8**), which is a bronze of a Cassander from 305–297 BC (Valassiadis 2005, 412, n. 4) with Heracles, a horseman, and a trident under him. Chronologically it is followed by cat. no. 7 (**Fig. 9**) from 220–179 BC, which can be attributed to Philip V and depicts Helios and a winged thunderbolt (Gaebler 1935, 193 n. 25, pl. XXXV n. 5; Τουράτσογλου 1993, pl. III n. 9). It originates from under the floor level of one of the rooms. A second example is cat. no. 8 (**Fig. 10**) from 178–168 BC (Gaebler 1935, 196, n. 7, pl. XXXVI n. 3; Prokopov et al., 2016, 347, fig. 4) which is a bronze issue of Perseus with the hero Perseus and an eagle. It was found under the floor level behind the fortification wall. In contrast to the forum, at the acropolis, there are clear indications that earlier structures connected to the first phase of the settlement might be found.

Later civic coins are, as expected, by the local suppliers such as Thessalonike with cat. no. 9 (**Fig. 11**), dated 187–40 BC, and with Zeus, and bull (Gaebler 1935, 120, n. 16, pl. XXIII n. 7; Τουράτσογλου 1993, pl. IX n. 13). However, it was located on the dated Roman floor of R1B. Cat. no. 10 (**Fig. 12**) is from the same mint and is dated to the same period (Gaebler 1935, 120, n. 15, pl. XXII n. 23). It is of the type with Dionysus and a goat. It was found under the room floor and

might hint at the existence of predecessor buildings. The same type was also found in the burnt layers (cat. no. 11, **Fig. 13**), which again indicates that those coins might have no dating importance when discovered in later layers. From the same mint, there is a type that is dated to 89–49 BC with Janus and two centaurs (cat. no. 12, **Fig. 14;** Gaebler 1935, 121, n. 20, pl. XXIII n. 10.), which was found in the channel. The next mint represented is Amphipolis, with the earlier type of cat. no. 13 (**Fig. 15**), dated to 187–31 BC (Gaebler, 1935, 37, n. 53, pl. IX n. 27), and depicting an Artemis bust and Artemis Tauropoulos on a bull, which came to light when cleaning R2B. It is followed by the type of cat. no. 14 (**Fig. 16**) from the same period (Gaebler 1935, 34, n. 31, pl. IX n. 6) but with a corn ear on the reverse and originating from R2A. In the channel, there was also an assarion, cat. no. 15 (**Fig. 17**), from Amphipolis with Zeus and a prow dated to 89–31 BC (Gaebler 1935, 36, n. 42, pl. IX n. 16).

Both coins found in the channel indicate Roman influence on the mints via iconography with Janus or denomination with the assarion. That this kind of influenced coinage was accepted in Heraclea is a sign that what seems a strong bond to Macedonian identity (Murray 2020, 146) might as well be a controlled supply of monetary means. The contexts of the acropolis are on or below the walking level of the buildings with rooms behind the fortification wall or even in the water channel, and they are better sources of information about coin distribution in this frontier area. The coins found show a tendency towards Romanisation, which would be the basis for interpreting them as authority signs in Greek-moulded territories (Kremydi-Sicilianou 2005, 97–101). The iconographies accepted, however, also include typical Macedonian deities also worshipped in Heraclea, like Artemis (Вагалински 2022, 83).

## Roman Period

*Silver*

The forum is relatively abundant in silver Roman imperial coins. These are classic types but come from very different contexts. Cat. no. 16 **(Fig. 18**) is a denarius of Vespasian with clasping hands from AD 79 (RIC II$^2$.1, 1081), found in a debris layer of R1 of the WP. Cat. no. 17 (**Fig. 19**) is a Hadrianic type with Concordia from AD 124–125 (RIC II$^2$.3 716-717), found at the entrance of R4. Cat. no. 18 **(Fig. 20**) can be attributed to Septimius Severus in AD 197–198 (RIC IV, 120C) and was found in the southern end of the basilica, which is directly north of the west porticus. Cat. no. 19 (**Fig. 21**) came from a levelling of R2 most probably issued by the same emperor. Cat. no. 20 (**Fig. 22**) is a type of Caracalla with Mars on the reverse from AD 219–213 (RIC IV, 223) and was found in the south of the basilica, close to the entrance of R1 of the WP. Cat. no. 22 (**Fig. 24**) is an antoninianus from AD 241–243 (RIC IV, 93), issued by Gordian III and portraying himself on the reverse; it comes from the area of the entrance of R4. Cat. no. 23 (**Fig. 25**) is again an antoninianus of Philip I from AD 244–247 (RIC IV, 46) with Salus, found in a burnt layer from R5. Other antoniniani are Cat. no. 26 (**Fig. 28**) by Valerian with Apollo from AD 256–257 (RIC V, 72), from the burnt layer on the street before R2, as well as cat. no. 25 (Fig. 27) by Trebonianus Gallus with Ubertas from AD 251–253, (RIC IV, 64) again from the burnt layer but from R5. Cat. no. 27 (**Fig. 29**) is, exceptionally, an antoninianus from Cyzicus (RIC V, 116) by Florianus in AD 276, depicting Victoria, but it comes from a looting trench in R2.

From the female representations, only two are in silver. Cat. no. 21 (**Fig. 23**) is a denarius with Julia Mamaea with Felicitas from the time of Severus Alexander, i.e. AD 225–235 (RIC IV, 338), which came from debris in R1, and Cat. no. 24 (**Fig. 26**) is an antoninianus with Herenia Etruscilla and Pudicitia from Trajan Decius' reign, dated to AD 249–251 (RIC IV 65) and again from the burnt layer of R5.

*Forum Bronzes*

The bronze finds present a different picture. They are almost exclusively of local production, that is of Macedonian origin, and cover a different range.

Thessalonike issues include cat. no. 28 (**Fig. 30**) of Tiberius with Livia dated AD 22/23–37 (Touratsoglou, 1988, 158–160, nn. 33–61), coming from the burnt roof layer of R3. Cat. no. 29 (**Fig. 31**) comes from the same mint, but from the time of Nero and depicts a horse (RPC I, 1614).

It came from R1, just like the other Neronian coin – cat. No. 30 (**Fig. 32**) with Nero and a Macedonian shield, issued by the Macedonian Koinon around AD 54–68 (Gaebler 1906, 78, n. 242). This is also the sign that is depicted on the very rare Heraclean coins (Paunov 2015, 228–239).

The most common type appearing in Heraclea is one from Philippi dated to AD 41–68, thus attributed to Claudius or Nero with Victoria, three standards, and the legend COHOR PRAE PHIL (RPC I, 1651; Gaebler 1935, 102–103, nn. 14–15, pl. XX n. 10). In this catalogue, three examples are featured: cat. no. 31 (**Fig. 33**), found in R2 of the WP R2; cat. no. 32 (**Fig. 34**), found under the plaster of the square; and cat. no. 33 (**Fig. 35**), found in the S of the basilica corridor. They are Romanised emissions of the colony but were very popular in Heraclea since even stylised imitations of them appear often, such as cat. no. 34 (**Fig. 36**), which was found in the S of the basilica corridor and cat. no. 35 (**Fig. 37**), found in R5 of the WP with the skeletons in the cistern. Another probable imitation is the lead example of cat. no. 36 **(Fig. 38**), with a star and crescent from debris in R2 of the WP.

The Macedonian Koinon appears here in bronzes for Hadrian with a thunderbolt (RPC III, 632), as in cat. no. 37 (**Fig. 39**) for Antoninus Pius with the shield (Gaebler 1906, 83, n. 266a), in cat. no. 38 (**Fig. 40**), with Faustina the Younger (Gaebler 1906, 86, n. 285), and in cat. no. 39 **(Fig. 41**) – all found in the S of the basilica corridor.

With the exclusion of the only Thracian coin of the season from Serdica – Cat. no. 40 **(Fig. 42**) of Marcus Aurelius and Lucius Verus from AD 161–169, (Ruzicka 1915, n. 21) with a snake on an altar and found in the S of the basilica – there is a gap afterward until the later provincial coins. Except for a coin minted in AD 244–249 (RPC VIII, 286) in Pella for Philipp I with Pan found in the burnt layer from R5 in the WP and identified here as cat. no. 47 (**Fig. 49**), there is a clear tendency. The Macedonian Koinon continues a strong currency supply with a distinct Macedonian identity. It depicts Alexander the Great with a helmet or diadem and different classic provincial iconographies with the cista mystica, horseman, prize table, temples, etc. It can be dated to the time of Gordian III, as in cat. no. 41 (**Fig. 43**; Gaebler 1906, 173, nn. 769–770), found in the wall between R3 and R3A of the WP; cat. no. 42 (**Fig. 44**: Gaebler 1906, 174, n. 778), found in R3 of the WP R3; cat. no. 43 (**Fig. 45**), found in debris in R2 of the WP; and cat. no. 44 (**Fig. 46**), found in R5 of the WP. Others are from the time of Philip I, around AD 243–244, such as Cat. no. 45 (**Fig. 47**: Gaebler 1906, 175, n. 785? or 188, n. 857) from the entrance of R4 of the WP and Cat. no. 46 (**Fig. 48**; Gaebler 1906, 184, n. 833) from R3 of the WP.

Only one early pseudo-autonomous bronze coin from the period between AD 96 and 117 from Thessalonike with a city goddess and a Kabeiros has been found in the entrance of R2 of the WP in 2021: Cat. no. 48 (**Fig. 50**; Gaebler 1935, pl. XXIII n. 27; Τουράτσογλου 1993, 327, n. G. C2, Pl. 49, G.VI/CV1, R2).

The findings come from various areas of the WP and the connection to the basilica and the square as well, from debris and fire destruction, and even from the cisterns in R5 in the S. However, a more extensive investigation is needed to see the relations between the dispersion or allocation of the finds and the layers according to the entire stratigraphy.

*Acropolis*

There are only a few Roman specimens from the acropolis, starting with Cat. no. 49 (**Fig. 51**). It is dated from 27 BC–AD 14 or AD 14–37 and was minted for Philippi under Augustus or Tiberius (RPC I, 1656 and 1659), demonstrating colonial iconography with the head of Drusus or Augustus with two priests and two oxen, i.e. the ritual of *sulcus primigenius*. This specimen was found in the debris in R1A. Cat. no. 50 (**Fig. 52**) belongs to an already mentioned type of Tiberius with Livia from AD 22/23 until 37 by Thessalonike (Touratsoglou, 1988, 158–160, nn. 33–61), and was found in the west of the wall in R1A on a rock. Cat. no. 51 (**Fig. 53**) is also of an expected type from the Macedonian Koinon with Alexander and a prize table minted under Gordian III from AD 238 to 244 (Gaebler 1935, 177, n. 798), and it was found in the debris of the surrounding wall. All coins from the acropolis were found in debris in the buildings or the surrounding wall.

This shows one clear tendency. Heraclea developed from a satellite-controlling site in the centre of the area. It seems that in the early imperial times, Macedonian coins were being distributed

and then – in the 1st century – imitated. However, they bore a strong Roman influence, like the Philippi issue, and this continued as a trend from the Hellenistic period. It is noticeable that the Julio-Claudian Dynasty and the Antonines are more present in local bronze coinages that reach every layer of society. This indicates that a strong imperial presence on every level was needed to stabilise the ties and show the economic or even cultural connection of the emperors to the city through the circulation of these influenced currencies until this border region. This is a territorial occupation that would have had an indirect impact on identity. Even until the end of the 2nd century AD, only a few external (that is Thracian) coinages came to be in use in Heraclea, even if it is a neighbouring province, and the mixture with Thracians is a common occurrence. Macedonism is strong and creates a financial and cultural border that demarcates Macedon. Interestingly coinages that are very common in Thrace, such as bronzes of the Severans including Julia Domna, are not as common as seen from the material in this campaign. The question arises if this gap might be connected somehow to the attacks of the 2nd and 3rd centuries detected through archaeology and already mentioned above.

## Late Antiquity

In this period, we are to expect a decline because of the many natural disasters that struck Heraclea.

*Forum*

The forum shows a few examples like Cat. no. 52 (**Fig. 54**) of Constantine the Great from AD 335–336 (RIC VII, 526, n. 199) from Thessalonike depicting two warriors, which was unfortunately a stray find. Cat. no. 53 (**Fig. 55**) was also struck in Thessalonike in AD 367–375 (RIC IX, 176 n. 16a1A) for Valentinian I and shows the usual iconography with a captive. It was found under a sand layer in R2 of the WP.

*Acropolis*

The area of the acropolis has a more abundant inventory from this period. Cat. no. 54 (**Fig. 56**) is an example of an AE3 minted in Siscia in AD 319–320 for Constantine the Great (RIC VII, 437 n. 100), depicting two Victories and found on the floor between R2a and R2b. Cat. no. 55 (**Fig. 57**) is an AE4 with a gate depiction for Theodosius I from AD 383–388 (RIC IX, n. 62B) minted in Thessalonike it was found in the SE of R1A. Not included in the catalogue is the hoard inv. no. Acropolis 65 that was found on the floor of R2B, which contains coins of Constantinus the Great from Rome (AD 347), Theodosius I from Cyzicus (AD 383), Valentinian from Rome (AD 388), Theodosius II or Honorius (AD 408–423), Theodosius II (AD 425), and others (Вагалински 2022, 71, n. 258). It will be analysed in detail elsewhere.

Quite interestingly, closing on the Byzantine Empire, there are quite a few finds and not always of the smallest denomination. From the time of Justinian I, i.e. AD 527–565, there were 40 nummi from Carthage found in the SE of R1A under cat. no. 56 (Hahn 2013, 158, n. 184b, pl. 30 n. 184b) and 16 nummi on the floor of R1A, such as cat. no. 57 (**Fig. 59**; Hahn 2013,153–154 n.169, pl. 28–29 n. 169). From a later emission of Justinian I (AD 538–539) are the 40 nummi from Constantinople, like Cat. no. 58 (**Fig. 60**; Hahn 2013, 129, n. 95a, pl. 20 n. 95a; Вагалински 2022, 72, n. 265). From the same emperor is the only gold coin, cat. no. 59 (**Fig. 61**) – a tremissis also found in the SE of R1A. It dates to AD 527–565 and was from Constantinople, Thessalonike, or Sicily (Hahn 2013, 115 n. 19, pl. 14 Fig. 11.2; 116, n. 24b, pl. 14 Fig. 24b; 117 n. NN39, pl. 15 Fig. 41.2). This gives a good reason to doubt that the acropolis had lost its strategic importance.

## Conclusion

The evaluation of the data shows a pattern of demarcation through Macedonian currency, which, however, was under Roman control or influence as we know and have seen from the assarion from Amphipolis or later in the imperial coinage through the mint of Philippi. This is one way of marking the area, excluding other mints and imitating the wanted types, next to also establishing the rule through classic military intervention such as the Republican military camp of Polenitsa found north of Heraclea. Having these measures along the river Strymon fits the con-

ception of the Roman *limes* and *ripae* (Isaac 1988, 130; Schallmayer 2011; Wells 2005, 65). This river existed already in antiquity, since the Argeads were present in the region, and was seen as a border between the Thracians in the Rhodope Mountains and Macedonia (Ptol. Geogr. 3.12.15; Ps.-Skyl. 67). It was only logical that the geographic and cultural frontiers would be maintained. Other distinguishing features that were indicative of identity – such as religion – were also used in parallel on coinages and through other sources. Some Macedonian and Roman gods were introduced, such as the cult of Pluto und Zeus Hypsistos (Chatzinikolaou 2010, 196–197, 208), and the already mentioned Janus (Betsiou 2016, 139, n. 78). To use coins as a marker, the religious signs were only natural since they had their territories and also gods like Terminus or Fines, as they defined borders even inside provinces (Kolb 2016, 12–13). However, this is not enough evidence to unfold the complete frontier strategy of the arriving Romans. They had to approach a situation of a 'liquid frontier,' and it was not easy to set material markers. A cross-study with other materials is essential in this case (Costa 2011, 52) and references to survey data, which is partially available, is also necessary (Δαδάκη et al. 2014; Вагалински 2022, 321, fig. 594–595; Вагалински et al. 2017). It is important that rural development and urbanisation were evolving hand in hand with the economy and were also influenced by the measures taken for the currencies to be used; that research must also be evaluated (Evangelidis 2022; Колев 2020).

It is too early to interpret the interconnections between excavation areas and context since a complete comparison to the stratigraphy is needed. Some patterns are occurring (like clusters), but anomalies of close levels with a wide chronological range according to the coins still exist and must be examined carefully. The distortion of data by the hoards and the concentration of campaigns in certain areas should be considered. Concerning the comparison of the complete material from the site, it must be said that it is mostly from the forum area and shows similar tendencies. This is confirmed by the publication of Filipova and Ivanov from 2015 (Filipova, Ivanov 2015). Strong orientation towards the core Macedonian mints is evident due to the comparison to complete numismatic material. Now the connection of this phenomenon to the Roman presence is also confirmed. It reveals complex regional interrelations and the development of the city showing a different concentration of the commercial distribution areas from Hellenistic period until Late Antiquity.

## Catalogue of the discussed Coins

All coin photo are of Lily Grozdanova

**Abbreviations**

WP – West Porticus of the Forum
R – Room
T – Thickness
S – South
SE – Southeast

### Hellenistic Period and the Roman Republic

**Forum**

*Royal – Bronze*

Antigonos Gonatas, Pella or Amphipolis, 277–239 BC

Obv. Head of Athena to right, with a Corinthian helmet.

Rev. Pan standing right, building a tropaion, behind him a monogram.
(Gaebler, 1935, 187 n. 6, pl. XXXIV n. 4).

1. 19.3 mm, 8.37 g, T 4.2, axis 12, Inv. No. 1915, Findspot: WP, R2, levelling with debris. **(Fig. 3)**

*Civic – Bronze*

Amphipolis, 187–31 BC

Obv. Bust of Artemis to right, with wreath.
Rev. ΑΜΦΙΠΟ / ΛΕΙΤΩΝ
Bull to right, with frontal head.
(Gaebler 1935, 36, n. 43, pl. IX n. 17)
2. 19.6 mm, 4.95g, T 2.9 mm, axis 12, Inv. no. 1973, Findspot: WP, R1, baulk. **(Fig. 4)**
Obv. Ibid.
Rev. ΑΜΦ[ΙΠΟ] / ΛΙΤΩΝ
Ibid.
(Gaebler 1935, 35, n. 33, pl. IX n. 8)
3. 21.9 mm, 8.34 g, T 4.1 mm, axis 12, Inv. no. 1996, Findspot: WP, R1. **(Fig. 5)**

*Roman Republican – Silver*

Marcus Pletorius Cestianus, 69 BC, Denarius

Obv. Head of Fortuna to right.
Rev. [SORS] M·PLAET[ORI·CEST·]S·C
Frontal bust of boy, holding inscribed tablet.
(RRC 405.2) http://numismatics.org/crro/id/rrc-405.2
4. 16.9 mm, 3.33 g, T 2.3 mm, axis 6, Inv. No. 1943, Findspot: WP, R3, fire of floor 3. **(Fig. 6)**

Quintus Caecilius Metellus Pius Scipio, Africa, 47/46 BC, Denarius

Obv. Q METEL // PIVS
Laureate head of Jupiter to right.
Rev. SCIPIO // IMP
Elephant to right.
(RRC 459.1) https://numismatics.org/crro/id/rrc-459.1
5. 17.2 mm, 3.11g, T 2.3 mm, axis 7, Inv. No. 2006, Findspot: WP, R5. **(Fig. 7)**

**Acropolis**

*Royal – Bronze*

Cassander, 305–297 BC

Obv. Head of Heracles right, with lion's skin.
Rev. Horseman right, underneath trident.
(Valassiadis 2005, 412, n. 4)
6. 18.1 mm, 6.3 g, T 4 mm, axis 11, Inv. No. 53, Findspot: 2B, debris. **(Fig. 8)**

Philip V, 220–179 BC

Obv. Head of Helios right.
Rev. ΒΑΣΙΛΕΩΣ / ΦΙΛΙΠΠΟΥ ...
Winged lightning in oak wreath.
(Gaebler 1935, 193, n. 25, pl. XXXV n. 5; Τουράτσογλου 1993, pl. III n. 9)
7. 25.9 mm, 10.72 g, T 3.9, axis 2, Inv. No. 105, Findspot: under floor level of room 1a. **(Fig. 9)**

Perseus, 178–168 BC

Obv. Head of the hero Perseus to right, with harp on the shoulder, wearing winged helmet with a griffon.

Rev. B A // EP

Eagle with spread wings advancing left, with head to right, stepping on a plough; on the left torch (?).

(Gaebler 1935, 196, n. 7, pl. XXXVI n. 3; Prokopov et al. 2016, 347, fig. 4) Gaebler sees a corn ear instead of a torch.

8. 21.9 mm, 8.32 g, T 3.8 mm, axis 11, Inv. No. 10, Findspot: on floor level behind the fortification wall. **(Fig. 10)**

*Civic – Bronze*

Thessalonike, 187–40 BC

Obv. Laureate head of Zeus to right.

Rev. ΘΕΣΣΑΛ / [Ο]ΝΙΚΗ[Σ]

Eagle standing right, with spread wings, standing on a bundle of lightning.

(Gaebler 1935, 120, n. 16, pl. XXIII n. 7; Τουράτσογλου, 1993, pl. IX n. 13)

9. 22 mm, 9.7 g, T 4 mm, axis 12, Inv. No. 110b, Findspot: on Roman floor level of R1B. **(Fig. 11)**

Obv. Head of Dionysos to right, with ivy wreath.

Rev. [ΘΕΣΣΑΛΟ/ΝΙΚΗΣ]

Goat standing right.

(Gaebler 1935, 120, n. 15, pl. XXII n. 23)

10. 18 mm, 5.78 g, T 3.9 mm, axis 12, Inv. No. 80, Findspot: 2A, under room floor. **(Fig. 12)**

Obv. Ibid.

Rev. [ΘΕΣΣΑΛΟ/Ν]ΙΚΗ[Σ]

Ibid.

(Gaebler 1935, 120, n. 15, pl. XXII n. 23)

11. 19.1 mm, 4.34 g, T 2.9 mm, axis 1, Inv. Nr. 83, Findspot: 1A, SE (fire). **(Fig. 13)**

Thessalonike, 89–49 BC

Obv. Head of Janus.

Rev. [ΘΕΣΣΑΛΟ/ΝΙΚΗΣ]

Two centaurs jumping away from each other.

(Gaebler 1935, 121, n. 20, pl. XXIII, n. 10.)

12. 17.4 mm, 4.15 g, T 2.9 mm, axis 12, Inv. No. 77, Findspot: 2B, channel. **(Fig. 14)**

Amphipolis, 187–31 BC

Obv. Bust of Artemis to right, with a hair bun and a quiver. Border of dots.

Rev. [ΑΜΦΙΠΟΛΕΙΤΩΝ]

Artemis Tauropoulos with lifted hands, holding a veil, riding a bull jumping right.

(Gaebler 1935, 37, n. 53, Pl. IX n. 27)

13. 15.9 mm, 4.48 g, T 3.8 mm, axis 12, Inv. No. 66, Findspot: cleaning of 2B. **(Fig. 15)**

Obv. Male head to right, with long hair in a bun and an ear wreath.

Rev. [ΑΜΦΙΠΟ/ΛΙΤΩΝ]

Corn ear.

(Gaebler 1935, 34, n. 31, pl. IX n. 6)

14. 15.4 mm, 4.3 g, T 4 mm, axis ?12, Inv. No. 52, Findspot: 2A, room. **(Fig. 16)**

Amphipolis, 89–31 BC, Assarion

Obv. Laureate head of Zeus to right, behind S.

Rev. ΑΜΦΙΠΟ/ΛΙΤΩΝ / Α/ΕS

Prow right.

(Gaebler 1935, 36 n. 42, pl. IX n. 16)

15. 20.1 mm, 5.97 g, T 3.1 mm, axis 12, Inv. No. 76, Findspot: in channel. **(Fig. 17)**

**Roman Imperial and Provincial**

**Forum**

*Roman Imperial Silver*

Vespasian, AD 79, Denarius

Obv. CAESAR AVG F DOMITIANVS COS VI

Laureate head of Domitian to right.

Rev. PRINCEPS IVVENTVTIS

Clasping hands, holding an aquila supported by a prow underneath.

(RIC II$^2$.1, 1081) http://numismatics.org/ocre/id/ric.2_1(2).ves.1081

16. 17.7 mm, 2.65 g, T 2.3 mm, axis 6, Inv. No. 1923, Findspot: WP, R1, debris. **(Fig. 18)**

Hadrian, AD 124–125, Denarius

Obv. HADRIANVS - AVGVSTVS

Laureate head of Hadrian to right.

Rev. COS III

Concordia seated on throne right, holding patera in right hand, resting left hand on statue of Spes (?).

(RIC II$^2$.3 716-717) https://numismatics.org/ocre/id/ric.2_3(2).hdn.716-717

17. 19.2 mm, 2.83g, T 2.2 mm, axis 6, Inv. No. 1990, Findspot: WP, R4 entrance. **(Fig. 19)**

Septimius Severus, AD 197–198, Denarius

Obv. L SEPT SEV PERT - AVG IMP X

Laureate bust of Septimius Severus to right.

Rev. VICT AVG-G - C-OS II P P

Victoria advancing left, with wreath in right hand and palm branch in left hand.

(RIC IV, 120C) https://numismatics.org/ocre/id/ric.4.ss.120C

18. 18.3 mm, 2.9 g, T 2 mm, axis 6, Inv. No. 2076, Findspot: S of the basilica. **(Fig. 20)**

Septimius Severus?

19. 9.5–13.4 mm, 0.47 g, T 1.9 mm, axis ?12, Inv. No. 1903, Findspot: WP, R2, levelling. **(Fig. 21)**

Caracalla, AD 210–213, Denarius

Obv. ANTONINVS PIVS AVG BRIT

Laureate bust of Caracalla to right.

Rev. MARTI - PROPVGNATORI:

Mars advancing right, wearing helmet and cuirass, holding in right hand spear and carrying a trophy over left shoulder.

(RIC IV, 223) http://numismatics.org/ocre/id/ric.4.crl.223

20. 18.4 mm, 2.65 g, T 2.1 mm, axis 6, Inv. No. 2075, Findspot: S of the basilica, close to WP, R1, entrance. **(Fig. 22)**

Julia Mamaea, AD 225–235 (Severus Alexander), Denarius

Obv. IULIA MA- MAEA AVG

Diademed bust of Julia Mamaea to right.

Rev. FELICITAS PVBLICA

Felicitas, seated left, draped, holding caduceus in right hand and cornucopia in left hand.

(RIC IV, 338) http://numismatics.org/ocre/id/ric.4.sa.338

21. 18.1 mm, 3.08 g, T 2.3 mm, axis 7, Inv. No. 1908, Findspot: WP, R1, debris. **(Fig. 23)**

Gordian III, AD 241–243, Antoninianus

Obv. IMP GORDIANVS PIVS FEL AVG

Radiate bust of Gordian III to right.

Rev. P M TR P V COS II P P // S C

Gordian III standing right, holding transverse spear in right hand and a globus in left hand.

(RIC IV, 93) https://numismatics.org/ocre/id/ric.4.gor_iii.93

22. 22.3 mm, 3.06 g, T 1.9 mm, axis 12, Inv. No. 1991, Findspot: WP, R4, entrance. **(Fig. 24)**

Philip I, AD 244–247 AD, Antoninianus

Obv. IMP M IVL PHILIPPVS AVG

Radiate bust of Philip I to right, with paludamentum.

Rev. SALVS AVG

Salus standing right, feeding a serpent.

(RIC IV, 46) http://numismatics.org/ocre/id/ric.4.ph_i.46

23. 22.6 mm, 3.86 g, T 2 mm, axis 12, Inv. No. 2018, Findspot: WP, R5 fire. **(Fig. 25)**

Herenia Etruscilla, AD 249–251 (Trajan Decius), Antoninianus

Obv. HER ETRVS-CILLA AVG

Diademed bust of Herenia Etruscilla to right, on crescent.

Rev. [PVDICITIA AVG]

Pudicitia seated left, draped and veiled, covering face with veil with right hand, holding sceptre in left hand.

(RIC IV, 65) http://numismatics.org/ocre/id/ric.4.tr_d.65

24. 23.3 mm, 1.98 g, T 2 (1.2), axis 6, Inv. No. 2027, Findspot: WP, R5, fire. **(Fig. 26)**

Trebonianus Gallus, AD 251–253, Antoninianus

Obv. IMP CAE C VIB TREB GALLVS AVG

Radiate Bust of Trebonianus Gallus, with paludamentum.

Rev. [VBER]TAS AVGG

Ubertas standing left, crossing legs, resting with left arm on a column, holding with it a

sceptre and with the right hand a purse.

(RIC IV, 65) http://numismatics.org/ocre/id/ric.4.tr_g.64

25. 21.3 mm, 2.58 g, T 1.9 mm, axis 6, Inv. No. 2020, Findspot: WP, R5, fire. **(Fig. 27)**

Valerian, AD 256–257, Antoninianus

Obv. IMP C P LIC VALERIANVS P F AVG

Radiate Valerian to right, with cuirass.

Rev. APOLINI CONSERVA

Apollo standing right, holding laurel branch in right hand, resting left hand on a lyre on rock.

(RIC V, 72) http://numismatics.org/ocre/id/ric.5.val_i.72

26. 20.3–23.9 mm, 2.13 g, T 1.8 mm, axis 12, Inv. No. 2079, Findspot: fire on the street before WP, R2. **(Fig. 28)**

Cyzicus, Florianus, AD 276, Antoninianus

Obv. IMP FLORIANVS AVG

Radiate bust of Florianus to right, with paludamentum.

Rev. CONCORDIA MILITVM // V

Victory standing right, holding a palm branch in right hand, crowning Florian with wreath. Florian standing left, holding sceptre.

(RIC V, 116) http://numismatics.org/ocre/id/ric.5.fl.116

27. 21.8 mm, 3.24 g, T 1.8 mm, axis 12, Inv. No. 1918, Findspot: WP, R2, looters trench. **(Fig. 29)**

*Roman Provincial – Bronze*

Thessalonike, Tiberius, AD 22/23–37

Obv. ΤΙ ΚΑΙΣΑΡ ΣΕ-ΒΑΣΤΟΣ

Head of Tiberius to right.

Rev. [ΣΕΒΑΣΤΗ] ΘΕΣΣΑΛΟΝΙΚΕΩΝ

Head of Livia to right.

(Touratsoglou 1988, 158–160, nn. 33–61); https://rpc.ashmus.ox.ac.uk/coins/1/1567

28. 23.8 mm, 9.43 g, T 3.5 mm, axis 6, Inv. No. 1921, Findspot: WP, R3, fire of roof. **(Fig. 30)**

Thessalonike, Nero, AD 54–68

Obv. ΝΕΡΩΝ

Head of Nero to right.

Rev. Horse standing left, lifting right hoof, six-rayed star, and palm branch above. Border of dots.

(RPC I, 1595A) https://rpc.ashmus.ox.ac.uk/coins/1/1595A

29. 14.6 mm, 2.67 g, T 2.4 mm, axis 6, Inv. No. 1907, Findspot: WP, R1. **(Fig. 31)**

Macedonian Koinon, Nero, 54–68 AD

Obv. Head of Nero to left.

Rev. ΣΕΒΑΣΤΟΣ ΜΑΚΕΔΟΝΩΝ

Macedonian shield.

(RPC I, 1614; Gaebler 1906, 78, n. 242) https://rpc.ashmus.ox.ac.uk/coins/1/1614

30. 23.3 mm, 8.4 g, T 3.8 mm, axis 12, Inv. No. 1938, Findspot: WP, R1, debris. **(Fig. 32)**

Philippi, Claudius or Nero, 41–68 AD

Obv. [V]IC - AV[G]
Statue of Victory on base, standing left, holding a laurel wreath in right hand, and carrying a palm branch over left shoulder.
Rev. COHOR [P]RAE // PHIL
Three standards on ground line.
(RPC I, 1651; Gaebler 1935, 102–103, nn. 14–15, pl. XX n. 10)
https://rpc.ashmus.ox.ac.uk/coins/1/1651

31. 19 mm, 5.55 g, T 3 mm, axis 6, Inv. No. 1914, Findspot: WP, R2. **(Fig. 33)**
32. 16.8 mm, 3.35 g, T 2.2 mm, axis ?6, Inv. No. 2005, Findspot: under the plaster of square. **(Fig. 34)**
33. 17.5 mm, 3.86 g, T 2.5 mm, axis ?6, Inv. No. 2084, Findspot: S of basilica corridor. **(Fig. 35)**

Imitations Philippi

34. 13.8 mm, 1.44 g, T 2 mm, axis 6, Inv. No. 2071, Findspot: S of basilica corridor. **(Fig. 36)**
35. 13.6 mm, 2.4 g, T 2. 8mm, axis, 7, Inv. No. 2062, Findspot: WP, R5, with the skeletons. **(Fig. 37)**

Lead Imitations unknown

Obv. -
Rev. Six-rayed star and crescent.
(Prokopov et al., 2016, 198 n. 246)

36. 14.8 mm, 1.44 g, T 1.2 mm, Inv. No. 1959, Findspot: WP, R2, debris. **(Fig. 38)**

Macedonian Koinon, Hadrian, AD 129–138

Obv. ΑΔΡΙΑΝΟ
Laureate bust of Hadrian to right.
Rev. ΚΟΙΝΟΝ
Winged lightning.
(RPC III, 632) https://rpc.ashmus.ox.ac.uk/coins/3/632

37. 25.9 mm, 11.62 g, T 3.9 mm, axis 1, Inv. No. 2086, Findspot: S of basilica corridor. **(Fig. 39)**

Macedonian Koinon, Antoninus Pius, AD 138–161

Obv. ΚΑΙCΑΡ ΑΝ / ΤΩΝΙΝΟ [C]
Laureate bust of Antoninus Pius to right, with paludamentum.
Rev. ΜΑΚΕΔΟΝΩΝ ΚΟΙΝΟΝ
Macedonian shield
(Gaebler 1906, 83, n. 266a) https://rpc.ashmus.ox.ac.uk/coins/4/4270

38. 22.7 mm, 5.09 g, T 2.5 mm, axis 12, Inv. No. 2072, Findspot: S of basilica corridor. **(Fig. 40)**

Macedonian Koinon, Faustina the Younger, AD 147–176
(Antoninus Pius or Marcus Aurelius)

Obv. ΦΑV[CTЄΙΝΑ CЄΒΑCΤΗ]

Bust of Faustina the Younger to right.

Rev. KOINON MA-KƐΔONƆN

Winged lightning.

(Gaebler 1906, 86, n. 285) https://rpc.ashmus.ox.ac.uk/coins/4/4292

39. 24.4 mm, 9.98 g, T 3.9 mm, axis 1, Inv. No. 2081, Findspot: S of basilica, corridor. **(Fig. 41)**

Serdica, Marcus Aurelius and Lucius Verus, AD 161–169

Obv. [AV K]AI Λ A[VPHΛIOC OVHPOC]

Laureate bust of Lucius Verus to right.

Rev. CEPΔΩN

Serpent coiled twice to left, on decorated altar.

(Ruzicka 1915, n. 21) https://rpc.ashmus.ox.ac.uk/coins/4/3481

40. 18.3–20.4 mm, 3.97 g, T 2.8 mm, axis 2, Inv. No. 2089, Findspot: S of the basilica. **(Fig. 42)**

Macedonian Koinon, Gordian III, AD 238–244

Obv. Helmeted head of Alexander the Great to right.

Rev. ... NEOK

Alexander the Great riding Bucephalus to right, wearing a mantle, holding a spear.

(RPC VII.2, 280; Gaebler 1906, 173, nn. 769–770)

https://rpc.ashmus.ox.ac.uk/type/66421

41. 26.1 mm, 13.42 g, T 4.1 mm, axis 6, Inv. No. 2085, Findspot: wall between R3 and 3A of WP. **(Fig. 43)**

Obv. AΛƐΞAN[ΔPOY]

Ibid.

Rev. [M]AKƐΔONΩN B N

Ibid.

(RPC VII.2, 275; Gaebler 1906, 174, n. 778), https://rpc.ashmus.ox.ac.uk/type/70856

42. 26.2 mm, 9.69 g, T 3 mm, axis 6, Inv. No. 2093, Findspot: WP, R3. **(Fig. 44)**

Obv. [A]ΛΕΞANΔP[OY]

Ibid. Griffin on helmet.

Rev. [MAK]EΔONΩN [B] NEΩ

Ibid. Star below.

(RPC VII.2, 275; Gaebler 1906, 173, nn. 769–770); https://rpc.ashmus.ox.ac.uk/type/66421

43. 26.5 mm, 6.02 g, T 2.9 mm, axis 1, Inv. No. 1935, Findspot: WP, R2, debris. **(Fig. 45)**

Obv. AΛƐΞANΔPOY

Diademed head of Alexander the Great to right.

Rev. KOINON MAKƐΔONΩN B NƐΩKOP

Prize table from the left, on top two prizes with palm branches, underneath an amphora.

(RPC VII.2, 128; Gaebler 1906, 144, n. 598), https://rpc.ashmus.ox.ac.uk/type/67048

44. 26.6 mm, 11.99 g, T 3.9 mm, axis 1, Inv. No. 2013, Findspot: WP, R5. **(Fig. 46)**

Macedonian Koinon, Philip I, AD 243–244

Obv. [AΛΕΞ]ANΔ[POY]

Head of Alexander the Great to right, with Attic (?) helmet.

Rev. KOINΩN [MAKEΔONΩN B NEO] // EOC

Cista mystica open to left, serpent coiling out.

(RPC VIII, 169; Gaebler 1906, 175, n. 785? or 188, 857) https://rpc.ashmus.ox.ac.uk/type/70369

45. 25.7 mm, 10.8 g, T 3.3 mm, axis 6, Inv. No. 1989, Findspot: WP, R4, entrance. **(Fig. 47)**

Obv. [AΛЄ]ΞANΔPOY

Diademed head of Alexander the Great to right.

Rev. KOINON / M AKƐΔ-O // B NƐΩKOPΩN / ƐOC

Two facades of hexastyle temples.

(RPC VIII, 169; Gaebler 1906, 184, n. 833) https://rpc.ashmus.ox.ac.uk/type/70337

46. 26.7 mm, 10.86 g, T 3.5 mm, axis 2, Inv. No. 2091, Findspot: WP, R3. **(Fig. 48)**

Pella, Philip I, AD 244–249

Obv. [IMP CAE] - M IV FILIPPVS

Laureate bust of Philip I to right, with cuirass and paludamentum.

Rev. COL IUL A-VS (*sic*) PELL

Pan seated left, on rock, raising his right hand over head, holding pedum in his left arm; to left syrinx. Centre hole.

(RPC VIII, 286) https://rpc.ashmus.ox.ac.uk/type/68785

47. 24.2 mm, 6.24 g, T 2.8 mm, axis 7, Inv. No. 2024, Findspot: WP, R5, fire. **(Fig. 49)**

Thessalonike, Pseudo-autonomous, AD 96–117

Obv. OECCAΛO-NIKEΩN

Turreted bust of Tyche to right.

Rev. KABI-PO-C

Kabeiros standing left, in chiton, holding rhyton in right hand and hammer in left.

(RPC III, 621; Gaebler 1935, pl. XXIII n. 27; Τουράτσογλου, 1993, 327 n. G. C2,Pl. 49 G.VI/CV1,R2) https://rpc.ashmus.ox.ac.uk/type/9098

48. 22 mm, 7.84 g, T 3.8 mm, axis 1, Inv. No. 2001, Findspot: WP, R2, entrance. **(Fig. 50)**

**Acropolis**

*Roman Provincial – Bronze*

Philippi, Augustus or Tiberius, 27 BC/AD 14–AD 14/37

Obv. Head of Drusus or Augustus (?) right.

Rev. Two priests right, ploughing with two oxen.

(RPC I, 1656 and 1659) https://rpc.ashmus.ox.ac.uk/type/58800, https://rpc.ashmus.ox.ac.uk/type/58806

49. 17.5 mm, 4.6 g, T 2.9 mm, axis 6, Inv. No. 90, Findspot: debris in R1A. **(Fig. 51)**

Thessalonike, Tiberius, AD 22/23–37

Obv. TI KAIΣAP ΣE-BAΣTOΣ

Head of Tiberius right.

Rev. [Σ]EBAΣTH [ΘEΣΣAΛONIKEΩN]

Head of Livia right.

(RPC I, 1567; Touratsoglou, 1988, 158–160, nn. 33–61) https://rpc.ashmus.ox.ac.uk/coins/1/1567

50. 22.2 mm, 9.91 g, T 4.1 mm, axis 7, Inv. No. 17, Findspot: west of wall in R1A on rock. **(Fig. 52)**

Macedonian Koinon, Gordian III, AD 238–244

Obv. ΑΛΕΞΑΝΔΡΟC

Head of Alexander the Great right. Border of dots.

Rev. KOINON - ΜΑΚΕΔΟΝΩΝ Β ΝΕΟ // ΟΛ/ΛΥΜ/ΠΙΑ

Prize table, on top two prizes with palm branches, above it eight-rayed star underneath legend. Border of dots.

(Gaebler 1935, 177, n. 798)

51. 27.3 mm, 11.86 g, T 4.3 mm, axis 8, Inv. 46, Findspot: in the surrounding wall debris. **(Fig. 53)**

**Late Antiquity and Byzantine Period**

**Forum**

*Copper alloy*

Constantine the Great, AD 335–336 AD, Thessalonike, AE3

Obv. CONSTANTINVS [IVN NOB C]

Laureate bust of Constantine the Great right, with cuirass.

Rev. GLORI-A EXER-[CITVS] // [S]MTS[A]

Two standing soldiers facing each other, holding in outer hands spears, resting inner arms on shields, between them two standards.

(RIC VII, 526, n. 199) https://numismatics.org/ocre/id/ric.7.thes.199

52. 16.9 mm, 1.33 g, T 1.1 mm, axis 6, Inv. No. 2098, Findspot: stray find. **(Fig. 54)**

Valentinian I, AD 367–375, Thessalonike, AE3

Obv. [D] N VALENTINI- [A]NUS P F AVG

Diademed bust of Valentinian I to right.

Rev. GLORIA RO-MANORVM // ΤΕΣ

Emperor advancing right, dragging captive with right hand and holding labarum in left hand.

(RIC IX, 176, n. 16a1A) https://numismatics.org/ocre/id/ric.9.thes.16A

53. 18.4 mm, 1.53 g, T 1.5 mm, axis 12, Inv. No. 1998, Findspot: WP, R2, under sand. **(Fig. 55)**

**Acropolis**

*Copper alloy*

Constantine the Great, AD 319–320 AD, Siscia, AE3

Obv. IMP [CONSTANTI]NVS P F AVG

Helmeted bust of Constantine the Great to right, with cuirass.

Rev. [VICT LA]ET[AE PRINC PERP] // S // SIS

Two standing Victories, facing each other, holding a shield with an inscription over an altar.

(RIC VII, 437, n. 100) https://numismatics.org/ocre/id/ric.7.sis.100

54. 16.9 mm, 2.34 g, T 2 mm, axis 12, Inv. no. 114, Findspot: floor between R2a and 2b. **(Fig. 56)**

Theodosius I, AD 383–388, Thessalonike, AE4

Obv. D N THEO[DO - SIVS P F AVG]

Bust of Theodosius I right, with diadem.

Rev. Gate.

(RIC IX, n. 62B) https://numismatics.org/ocre/id/ric.9.thes.62B

55. 14 mm, 1.13 g, T 1.2, axis 6, Inv. No. 93, Findspot: 1A SE room. **(Fig. 57)**

Justinian I, AD 527–565, Carthage, 40 Nummi

Obv. [D N IVSTINI - A]NVS PP AG

Bust of Justinian I to right, with diadem and Christogram on cuirass.

Rev. M Γ // KA[RT]

Legend, above cross, star on left, cross on right.

(Hahn 2013, 158, n. 184b, pl. 30 n. 184b)

56. 27.3 mm, 13.06 g, T 3.1 g, axis 11, Inv. No. 95, Findspot: 1A, SE room. **(Fig. 58)**

Justinian I, AD 527–565, 16 Nummi

Obv. [D N IVST]INI - [AN]VS P P A[VG]

Bust of Justinian I to right, with diadem, cuirass and paludamentum.

Rev. AISP

Legend in a dotted circle, above cross.

(Hahn 2013, 153–154, n.169, pl. 28–29 n. 169)

57. 25.3 mm, 9.45 g, T 3.2 mm, axis 6, Inv. no. 15, Findspot: floor of 1A. **(Fig. 59)**

Justinian I, AD 538–539, Constantinople, 40 Nummi

Obv. DN IVSTINI-ANVS PP AVI

Bust of Justinian I frontal with helmet, cuirass, holding a globus cruciger in right hand and shield in left, to right cross.

Rev. ANNO M X II // Δ // CON

Legend, above it cross.

(Hahn 2013, 129, n. 95a, pl. 20 n. 95a; Вагалински, 2022, 72, note 265) https://ikmk.smb.museum/object?lang=en&id=18258510

58. 39.7 mm, 14.48 g, 2.8 mm, axis 12, Inv. No. 186, Findspot: acropolis. **(Fig. 60)**

*Gold*

Justinian I; AD 527–565, Constantinople, Thessalonike, or Sicily, Tremissis

Obv. DN IVSTINI ANVS PP AVI

Bust of Justinian I to right, with diadem and paludamentum. Border of dots.

Rev. VICTORIA AUCVCTO[R] CONOB

Victoria standing right, holding a wreath in right hand, under right arm a star. Line border.

(Hahn 2013, 115, n. 19, pl. 14 fig. 11.2; 116, n. 24b, pl. 14 fig. 24b; 117, n. NN39, pl. 15 fig. 41.2)

59. 15.2–16.6 mm, 1.46 g, T 0.73 mm, axis 6, Inv. No. 19, Findspot: 1A, SE room. (**Fig. 61**)

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**Fig. 61.**

**Bibliography**

Alexandrova, S., 2020. Roman Temporary Military Camp from the 2nd Century BC near the Village of Polenitsa, Sandanski Municipality, SW Bulgaria. Archaeologia Bulgarica XXIV, 2, 41–77.

Betsiou, A., 2016. Reconsidering the Interpretation and Dating of Ancient Coins: The Case of Bronze Coins from Dodona in the Name of Menedemos Argeades. Gephyra 13, 127–148. https://doi.org/10.37095/gephyra.318439

Chatzinikolaou, K., 2010. Locating Sanctuaries in Upper Macedonia According to Archaeological Data. Kernos. Revue internationale et pluridisciplinaire de religion grecque antique 23, 193–222. https://doi.org/10.4000/kernos.1580

Costa, K. da, 2011. Drawing the Line: An Archaeological Methodology for Detecting Roman Provincial Borders, in: Hekster, O., Kaizer, T. (eds.), Frontiers in the Roman World. Proceedings of the Ninth Workshop of the International Network Impact of Empire (Durham, 16-19 April 2009). Brill, 49–60.

Daubner, F., 2018. Makedonien nach den Königen: 168 v. Chr. – 14 n. Chr. (Historia. Einzelschriften 251) Franz Steiner Verlag, Stuttgart.

Delev, P., 2014. A History of the Tribes of South-western Thrace in the First Millenium B.C. Sofia.

Evangelidis, V., 2022. The Archaeology of Roman Macedonia: Urban and Rural Environments. Oxbow Books, Oxford.

Filipova, S., Ivanov, S., 2015. Numismatic Data from the Archaeological Excavations at Heraclea Sintica Located on the Hill of Kozhuh, Petrich Municipality, in: Vagalinski, L., Nankov, E.

(eds.), Heraclea Sintica: From Hellenistic Polis to Roman Civitas (4th c. BC – 6th c. AD) : Proceedings of a Conference at Petrich, Bulgaria, September 19–21, 2013, Papers of the American Research Center in Sofia. American Research Center in Sofia, Sofia, 168–227.

Gaebler, H., 1935. Die antiken Münzen von Makedonia und Paionia (Die antiken Münzen Nord-Griechenlands 3,2) G. Reimer, Berlin.

Gaebler, H., 1906. Die antiken Münzen von Makedonien und Paionia (Die antiken Münzen Nordgriechenlands 3,1) G. Reimer, Berlin.

Hahn, W., 2013. Money of the Incipient Byzantine Empire. Anastastius I - Justinian I, 491–565, 2nd ed (Veröffentlichungen des Instituts für Numismatik und Geldgeschichte 15) Österreichische Forschungsgesellschaft für Numismatik am Institut für Numismatik und Geldgeschichte, Universität Wien, Wien.

Isaac, B., 1988. The Meaning of the Terms Limes and Limitanei. The Journal of Roman Studies 78, 125–147. https://doi.org/10.2307/301454

Kolb, A., 2016. The Importance of Internal Borders in the Roman Empire: Written Sources and Model Cases. Rome's Internal Frontiers. Proceedings of the 2016 RAC Session in Rome, Zürich, Zurich Studies in Archaeology Vol. 11 5–12.

Kremydi-Sicilianou, S., 2005. Belonging to Rome, Remaining Greek: Coinage and Identity in Roman Macedonia, in: Howgego, C.J., Heuchert, V., Burnett, A. (eds.), Coinage and Identity in the Roman Provinces. Oxford University Press, Oxford, 95–106. https://doi.org/ISBN: 0-19-926526-7

Mitrev, G., 2015. On the Borders and Urban Territory of Heraclea Sintica, in: Vagalinski, L., Nankov, E. (eds.), Heraclea Sintica: From Hellenistic Polis to Roman Civitas (4th c. BC – 6th c. AD) : Proceedings of a Conference at Petrich, Bulgaria, September 19–21, 2013, Papers of the American Research Center in Sofia. American Research Center in Sofia, Sofia, 47–53.

Murray, S., 2020. Identities in Roman Macedonia during the Early Imperial Period. Sapiens ubique civis 1, 141–160. https://doi.org/10.14232/suc.2020.1.141–160.

Nankov, E., 2015. In Search of a Founder and the Early Years of Heraclea Sintica, in: Vagalinski, L., Nankov, E. (eds.), Heraclea Sintica: From Hellenistic Polis to Roman Civitas (4th c. BC – 6th c. AD): Proceedings of a Conference at Petrich, Bulgaria, September 19–21, 2013, Papers of the American Research Center in Sofia. American Research Center in Sofia, Sofia, 7–35.

Parissaki, M. G., 2015. Reconstructing the Tribal History of the Middle Strymon Valley: the Impact of the Muletarovo Inscription, in: Vagalinski, L., Nankov, E. (eds.), Heraclea Sintica: From Hellenistic Polis to Roman Civitas (4th c. BC – 6th c. AD) : Proceedings of a Conference At Petrich, Bulgaria, September 19–21, 2013, Papers of the American Research Center in Sofia. American Research Center in Sofia, Sofia, 36–46.

Paunov, E. I., 2015. The bronze coinage of Heraclea Sintica. in: Vagalinski, L., Nankov, E. (eds.), Heraclea Sintica: From Hellenistic Polis to Roman Civitas (4th c. BC – 6th c. AD): Proceedings of a Conference At Petrich, Bulgaria, September 19–21, 2013, Papers of the American Research Center in Sofia. American Research Center in Sofia, Sofia, 228–239.

Prokopov, I., Filipova, S., Petkov, Vl., Ivanov, S., Andonova, M., 2016. Numismatic Collections of the Museums of Sandanski (Ancient Medius-Particopolis), Petrich (Ancient Heraclea Sintica/ Strimonica) and Gotse Delchev (Ancient Nicopolis ad Nestum) (CCCHBulg. 6) ProVias Ltd., Sofia.

Ruzicka, L., 1915. Die Münzen von Serdica. Numismatische Zeitschrift. Vienna.

Schallmayer, E., 2011. Der Limes: Geschichte einer Grenze, 3rd ed. (C.H. Beck Wissen 2318) Beck, München.

Sharankov, N., 2021. Five Official Inscriptions from Heraclea Sintica Including a Record of the Complete Cursus Honorum of D. Terentius Gentianus. Archaeologia Bulgarica XXV, 3, 1–43.

Sharankov, N., 2017. The Inscriptions of the Roman Colony of Deultum in Thrace. Archaeologia Bulgarica XXI, 3, 37–64.

Tačeva, M., 1995. The Last Thracian Independent Dynasty of the Rhascuporids, in: Al. Fol (ed.), Studia in Honorem Georgii Mihailov. "St. Kliment Ohridski" University Press, Sofia, 459–467.

Touratsoglou, G., 1988. Die Münzstätte von Thessaloniki in der römischen Kaiserzeit: 32/31 v. Chr. bis 268 n. Chr. W. de Gruyter, Berlin.

Vagalinski, L., 2020. Heraclea Sintica and Some of Its Recently Found Marble Sculptures. Archaeologia Bulgarica XXIV, 2, 1–39.

Vagalinski, L., 2017. Heraclea Sintica (Current Archaeological Chronology). Acta Musei Tiberiopolitani 2, 89–95.

Vagalinski, L., 2015. Recent Archaeological Data about Heraclea Sintica, in: Vagalinski, L., Nankov, E. (eds.), Heraclea Sintica: From Hellenistic Polis to Roman Civitas (4th c. BC – 6th c. AD): Proceedings of a Conference at Petrich, Bulgaria, September 19–21, 2013, Papers of the American Research Center in Sofia. American Research Center in Sofia, Sofia, 86–125.

Valassiadis, C., 2005. A Contribution to Cassander's Bronze Coinage, in: Alfaro Asíns, C., Marcos Alonso, C., Otero Morán, (eds.), XIII Congreso Internacional de Numismática Madrid - 2003: Actas, Proceedings, Actes. Ministerio de Cultura, 405–413.

Wells, P.S., 2005. Creating an Imperial Frontier: Archaeology of the Formation of Rome's Danube Borderland. Journal of Archaeological Research 13, 49–88.

Δαδάκη, Σ., Κουκούλη - Χρυσανθάκη, Χ., Σταμπούλογλου, Μ., 2014. Αρχαιολογικός Χάρτης του Δήμου Σιντικής. Archaeological Map of the Municipality Sintiki, in: Τσουκαλά, Ε., Κουκούλη - Χρυσανθάκη, Χ., Τσαρούχας, Γ., Αψηλίδης, Γ. Ν. (eds.), Δήμος Σιντικής. Ο Χώρος Και η Ιστορία Του. Για Τα 100 Χρόνια Από Την Απελευθέρωση Της Σιντικής. Δήμος Σιντικής, Siderokastro, 163–176. https://doi.org/10.13140/RG.2.1.2128.5360

Τουράτσογλου, Γ., 1993. Η Νομισματική κυκλοφορία στην αρχαία Μακεδονία (Περ. 200 π.Χ. - 268-286 μ.Χ.) Η μαρτυρία των "Θησαυρών," (Βιβλιοθήκη της Ελληνικής Νομισματικής Εταιρείας 1) Ελληνική Νομισματική Εταιρεία, Athens.

Вагалински, Л., 2022. Хераклея Синтика. История чрез археология (Archaeologia Bulgarica Supplement 4) NOUS Publishers, Sofia.

Вагалински, Л., Чолаков, И., Кечева, Н., 2017. Издирване на археологически обекти в община Петрич, in: Вагалински, Л. (ed.), Археологически открития и разкопки през 2016. Sofia, 690–691.

Гюзелев, В., Николов, Г.Н., 2015. Хиляда години от битката при Беласица и от смъртта на цар Самуил (1014–2014). Izdatelska kŭshta "Gutenberg", Sofia.

Колев, Ф., 2020. Селищна система в долината на Средна Струма през елинистическата епоха (IV в. пр. Хр. – средата на II в. пр. Хр.), in: Тонкова, М., Нехризов, Г. (eds.), Проблеми и изследвания на тракийската култура. Faber, Kazanlak, 185–223.

Митрев, Г., 2022. Филип II, Филип V или някой друг – кой създаде Хераклея Синтика?, in: Димитров, Д.В., Радев, Т., Попов, С., Кацаров, С., Лъсков, К., Босилкова, Д. (eds.), Ползата от историята. От Античността до наши дни. Сборник с доклади от международната конференция „Ползата от историята", посветена на 300-годишнината от рождението на Паисий Хилендарски и 260-годишнината от написването на „История Славянобългарска". Plovdiv, 36–56.

Митрев, Г., 2012. Долината на Струма през Античността. Племена и селища. IPL "Ekobelan," Asenovgrad.

# Egyptian Arab-Byzantine Coins discovered in Marea / Philoxenite*

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**Abstract:** Marea/Philoxenite flourished in the Early Byzantine period. One of the largest Christian basilicas in Egypt was erected there in the 6th century. The city performed a crucial role as a stopover on a pilgrimage route between Alexandria and the sanctuary of Abu Mina.
Approximately 9,000 coin finds have been registered during comprehensive archaeological research conducted by the University of Warsaw in cooperation with the Archaeological Museum in Krakow since 2000. The main purpose of the project 'Coin circulation in the Byzantine and Umayyad Marea / North Hawwariya: studies in the monetary economy of Mareotis region in the hinterland of Alexandria', directed by P. Jaworski, is to analyse the discovered coins.
Most of the 9,000 specimens were issued in Late Roman and Early Byzantine times. However, there is an addition of issues struck after the Arab conquest of Egypt in the 640s. Among them is a peculiar group of so-called Arab-Byzantine coins, which can contribute to our understanding of the transition period.

**Keywords:** Egyptian Arab-Byzantine coinage, Early Byzantine Empire, Byzantine Egypt, Umayyad Egypt.

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On the southern edge of Lake Mareotis lay the Byzantine city known as Marea/Philoxenite. It functioned as a hub for pilgrims making their way from Alexandria to the St. Menas sanctuary in Abu Mena. The city's imposing architecture is a testament to its golden age in the 6th century.

Since 2000, the Polish Centre for Mediterranean Archaeology has conducted archaeological

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research here.[1] While the Archaeological Museum in Krakow focuses its research on the basilica – the second largest discovered Byzantine church in Egypt after Abu Mena – and its surrounding area (Szymańska, Babraj 2012, 59–71; Babraj, Szymańska 2013, 169–194; Babraj 2018, 203–224; Babraj et al. 2020, 11–34), the team from the University of Warsaw (UW) has investigated important aspects of the city plan (Derda et al. 2020; Derda et al. 2020; Gwiazda et al. 2022, 3–41). Both the city's modular urbanism and the main street grid have been identified (Gwiazda, Derda 2021, 1–8; Gwiazda 2023, 196–214). Furthermore, additional churches and baptisteries were found in the southern portion of the city during the most recent seasons (2021–2022) (Gwiazda et al. 2022, 333–373). Research devoted to numismatic issues has been conducted since 2020 under the supervision of P. Jaworski.

Over 9,000 coins have been found since then. Among them, late Roman minimi predominate (ca. 50%). There is also a significant representation of Byzantine coins (~10%). The majority of the coins minted in Alexandria during the Byzantine era (AD 497–645) are known as dodecanummia. Post-reform Umayyad coins represent about 6% of the total amount. Byzantine coinage was in use under the Umayyads until at least the middle of the 8th century, according to archaeological discoveries (Jaworski 2023, 44). Intermediate coinage, i.e. issues struck after the Arab conquest and before the reform of 'Abd Al-Malik in AD 696/697, called Arab-Byzantine coins, circulated with them. These include coins issued in Egypt, which do not have the elements or Arabic legends typical of these issues.

The first issues minted in the conquered territories by the Arab resembled Byzantine coins (Pottier, Schulze, Schulze 2008, 87; Schulze 2013, 245). There is no consensus among researchers on the terminology used for these coins. Terms such as Arab-Byzantine, Pseudo-Byzantine, Byzantine-Muslim transitional coinage, Proto-Umayyad, etc. appear (Schulze, Oddy 2012, 190–191). There appears to be a general agreement only in the instance of the 'standing caliph' type, and even in this case there are critics (Schulze, Oddy 2012, 188). Either way, all coins from the early Arab period in the Middle East were modelled on Byzantine originals (usually folles). Similarly, in Egypt, the first Arab coins were modelled on Alexandrian dodecanummia. Despite the controversy around terminological inaccuracies, the authors of this article have chosen to adopt the most widely used term: Arab-Byzantine coins.

So far, only five coins of this type have been registered in Marea. However, cleaned material from previous years, as well as new finds from current investigations may increase this number (cf. Jaworski 2023, Fig. 1). Among them, there are three types of coins, including ABAZ, MACP and ΠAN, similar in terms of the images on the obverses to the Heraclius or Constans II coins. Individual legends were placed on the reverses of the coins in the lower sections, hence the type names. Their interpretation is not entirely certain. At the beginning, it was believed that the ABAZ legend was a blundering of the Byzantine ΑΛΕΞ, while ΠAN was read as ROM, thus pointing to coin prototypes. Scholars usually refer to the new Arab Egypt's capital, Fustat (*misr-* fort) when discussing the MACP type (cf. Walker 1956, 53; Domaszewicz, Bates 2002, 97, 103; Foss 2008, 102). Nevertheless, D. Woods has lately put out the theory that MACP might have been an acronym for Maslama ibn Mukhallad, the administrator of Egypt from AD 669–682 (Woods 2021, 252). Moreover, the legend of ABAZ was associated with 'Abd al-'Aziz, the brother of 'Abd Al-Malik and governor of Egypt between AD 685–704 (Woods 2021, 247–249). This type of coin, as well as MACP issues, were struck in the mint in Babylon/Fustat. The hypothesis regarding the incorrect spelling of the name ΠAN as ROM was also rejected. It is also worth noting that most of the known examples were cast (Metlich, Schindel 2004, 12; Foss 2008, 102–103; Goodwin 2014, 211). Sixty-one coins of this type were discovered at the site in Antinoöpolis in northern Upper Egypt, indicating the possible production of these coins there or in the vicinity of the city (Castrizio 2010). Another possible centre that could issue this type of coin is Panopolis, located approximately 100 km to the south (Kubitschek 1897; Metlich, Schindel 2004, 12; Goodwin 2014, 211).

[1] Excavations have been carried out by the University of Warsaw and the Archaeological Museum in Krakow.

Coins of the ABAZ, MACP, and ΠAN types can generally be dated to the second half of the 7th century AD. Unfortunately, it is not entirely possible to determine a more precise chronological range. Perhaps the earliest dates are the late 640s and the latest ca. 700 CE. In turn, if the interpretation of the ABAZ legend as related to ʻAbd al-Aziz is correct, then coins of this type can be dated to the period after AD 684/685 (Album, Goodwin 2002, 107; Goodwin 2014, 213).

Among the five Egyptian Arab-Byzantine coins discovered during archaeological research in Marea, two are ABAZ type coins (BMC Heraclius 304, MIB Constans II X35, Domaszewicz, Bates AII, DOC 140–141, Goodwin II), another two are of the ΠAN type (MIB Heraclius X48, Domaszewicz, Bates UII, DOC 142–143, Goodwin V), and one is of the MACP type (MIB Constans II X36, SICA 732 and 733, Domaszewicz, Bates AIII, DOC 131–139, Goodwin III).

Egyptian Arab-Byzantine coins from Marea have so far been registered mainly in the area of the great basilica excavated by the Archaeological Museum in Krakow, in rooms 16, 24, and 39. It should be emphasised that these issues were found in contexts with Byzantine as well as Umayyad coins, which confirms their common circulation in these periods (cf. Jaworski 2023, 44).

Coins of this category were also recorded at sites such as Apa Jeremias at Saqqara, Kom el-Dikka (Alexandria), Fustat, Abu Mina (cf. Foss 2008, 102–104; Goodwin 2014, 206–207), and Antinoöpolis (Castrizio 2010). Unfortunately, a large portion of the coins from various sites in Egypt still remains unpublished. The published material in turn is not always accompanied by photographs, which makes it difficult to verify individual descriptions in catalogues (cf. Metlich, Schindel 2004, 12).

Despite the currently small number of Egyptian Arab-Byzantine coins from Marea, there may be more finds of this type, both due to the material from previous years being cleaned on an ongoing basis as well as new discoveries. The new finds expand our knowledge of these types of coins recorded in Egypt and therefore reflect the monetary circulation at the end of the 7th and beginning of the 8th century AD. Let us hope that new publications of numismatic material from various sites will be able to deepen our analysis in the future.

**Fig. 1.** Arab-Byzantine, AE, ABAZ Type, Al-Fustat?, after AD 684/685, photo by Piotr Jaworski.

**Fig. 2.** Arab-Byzantine, AE, ABAZ Type, Al-Fustat?, after AD 684/685, photo by Piotr Jaworski.

**Fig. 3.** Arab-Byzantine, AE, MACP Type, Al-Fustat, ca. 670–690, photo by Piotr Jaworski.

**Fig.4.** Arab-Byzantine, AE, ΠAN Type, photo by Piotr Jaworski.

**Fig. 5.** Arab-Byzantine, AE, ΠAN Type, photo by Piotr Jaworski.

**Abbreviations**

BMC = Wroth, W., 1908. Catalogue of the Imperial Coins in the British Museum: 1. British Museum, London.

Domaszewicz, Bates = Domaszewicz, L., Bates, M., 2002. Copper Coinage of Egypt in the Seventh Century, in: Bacharach, J. (ed.), Fustat Finds: Beads, Coins, Medical Instruments, Textiles, and Other Artifacts from the Awad Collection. American University in Cairo Press, Cairo, 88–111.

DOC = Foss, C., 2008. Arab-Byzantine Coins: An Introduction, with a Catalogue of the Dumbarton Oaks Collection. Dumbarton Oaks Research Library and Collection, Washington, DC.

MIB Constans II = Hahn, W., 1981. Moneta Imperii Byzantini: 3: von Heraclius bis Leo III., Alleinregierung (610–720). Österreichischen Akademie der Wissenschaften, Vienna.

SICA = Album, S., Goodwin, T., 2002. Sylloge of Islamic Coins in the Ashmolean: 1: The Pre-Islamic Reform Coinage of the Early Islamic Period. Ashmolean Museum, Oxford.

**Bibliography**

Album, S., Goodwin, T., 2002. Sylloge of Islamic Coins in the Ashmolean: 1: The Pre-Islamic Reform Coinage of the Early Islamic Period. Ashmolean Museum, Oxford.

Babraj, K., 2018. Wielka Bazylika transeptowa w „Marei" w Egipcie z V w. i jej poprzednik, nowo odkryty kościół z IV w. w 2018 r. Materiały Archeologiczne 42, 203–224.

Babraj, K., Szymańska, H., 2013. Badania bazyliki i mol w Marei w Egipcie. Materiały Archeologiczne 39, 169–194.

Babraj, K., Drzymuchowska, A., Tarara, D., 2020. The 5th-century Great Transept Basilica in "Marea", Egypt, and the 4th-century Predecessor Church discovered in 2018, in: Myśliwiec, K., Ryś, A. (eds.), Crossing Time and Space to Commemorate Hanna Szymańska. Harrassowitz, Warsaw–Wiesbaden, 11–34.

Castrizio, D., 2010. Le Monete della Necropoli Nord di Antinoupolis (1937–2007). Istituto Papirologico G. Vitelli, Firenze.

Derda, T., Gwiazda, M., Barański, T., Pawlikowska-Gwiazda, A., Wieczorek, D. F., 2020. Excavations in the Northern and Eastern parts of the Byzantine Town at Marea. Polish Archaeology in the Mediterranean 29/2, 551–576.

Derda, T., Gwiazda, M., Pawlikowska-Gwiazda, A., 2020. Development of a Settlement on the Northeastern Promontory at 'Marea'. Polish Archaeology in the Mediterranean 29/2, 531–550.

Domaszewicz, L., Bates, M., 2002. Copper Coinage of Egypt in the Seventh Century, in: Bacharach, J. (ed.), Fustat Finds: Beads, Coins, Medical Instruments, Textiles, and Other Artifacts from the Awad Collection. American University in Cairo Press, Cairo, 88–111.

Foss, C., 2008. Arab-Byzantine Coins: An Introduction, with a Catalogue of the Dumbarton Oaks Collection. Dumbarton Oaks Research Library and Collection, Washington, DC.

Goodwin, T., 2015. The Egyptian Arab-Byzantine Coinage, in: Oddy, A., Schulze, I., Schultze, W. (eds.), Coinage and History in the Seventh Century Near East 4: Proceedings of the 14th Seventh Century Syrian Numismatic Round Table held at The Hive, Worcester, on 28th and 29th September 2013. Archetype Publications, London, 205–216.

Gwiazda, M., 2023. Modular Designs at the Early Byzantine Pilgrimage Site of Philoxenite, Egypt. Journal of Roman Archaeology 36/1, 196–214.

Gwiazda, M., Derda, T., 2021. Marea: A Swan Song of Ancient Urban Planning. Antiquity, 1–8.

Gwiazda, M., Derda, T., Barański, T., 2022. From Roman Industrial Center to Early Islamic Town: Archaeological Excavations at 'Marea'/Philoxenite in the 2020-2021 Season. Polish Archaeology in the Mediterranean 31, 333–373.

Jaworski, P., 2023. Preliminary Notes on the Coins found in Marea/Philoxenite. A Byzantine City in the Hinterland of Alexandria, in: Asolati, M. (ed.), … Per Mediterraneum. La Moneta tra nord Africa ed Europa occidentale in età antica e post-antica: atti del VI Congresso Internazionale di Numismatica e di Storia Monetaria, Padova, 27-29 ottobre 2022. Esedra editrice, Padova, 37–48.

Kubitschek, W., 1897. Beiträge zur frühbyzantinischen Numismatik 2: Verzeichnisse der im Wiener Münzkabinett befindlichen byzantinischen Zwölfer aus Münzstätte Alexandria. Numismatische Zeitschrift 29, 192–196.

Metlich, M., Schindel, N., 2004. Egyptian Copper Coinage in the 7th Century AD. Some Critical Remarks. Oriental Numismatic Society Newsletter 179, 11–15.

Pottier, H., Schulze, I., Schulze, W., 2008. Pseudo-Byzantine Coinage in Syria under Arab Rule (638-c.670). Classification and Dating, Revue Belge de Numismatique 154, 88–155.

Schulze, W., Oddy, A., 2012. Terminology for the Transitional Coinage struck in 7th Century Syria after the Arab Conquest, in: Goodwin, T. (ed.), Papers presented at the Seventh Century Syrian Numismatic Round Table held at Corpus Christi College, Oxford on 10th and 11th September 2011. Archetype Publications, London, 187–200.

Schulze, W., 2013. The Byzantine-Arab Transitional Coinage of Tartus. The Numismatic Chronicle 166, 242–259.

Szymańska, H., Babraj, K., 2012. Marea: Report 2009. Polish Archaeology in the Mediterranean 21, 59–71.

Walker, J., 1956. A Catalogue of the Arab-Byzantine and Post-reform Umaiyad Coins. British Museum, London.

Woods, D., 2021. A Note on the Arab-Byzantine Dodecanummium struck in the Name of ʻAbd al-Aziz ibn Marwan. Israel Numismatic Research 16, 243–253.

# New Developments in the MIB. The Analytics Package: Weight, Diameter and Axis

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**Abstract:** The website monedaiberica.org publishes a comprehensive catalogue of over 50,000 ancient coins from the Iberian Peninsula, including mean weight and diameter data for each type. We have enhanced the catalogue with two key features: (1) individual type records now display graphics with statistical calculations, and (2) a new dynamic analysis section enables users to perform custom catalogue queries with interactive statistical visualisations. This analytical tool facilitates comparative studies across different coin types and offers user controls for customising graphic parameters, significantly expanding the research capabilities of the platform.

**Keywords:** Iberian coinage, Catalogue, Statistics, Violin plot, Box plot, Kernel density plot.

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Recent ECFN meetings witnessed the progressive development of the Numisdata database and the creation of the digital catalogue of the Iberian coinage. This database is now publicly accessible at monedaiberica.org (MIB), which aims to organize the monetary production of the ancient cities of the Iberian Peninsula and Southern Gaul from a broad and multidisciplinary historical perspective. The term moneda ibérica reflects a geographical scope, encompassing coinages struck in the Iberian Peninsula by Greeks, Punics/Carthaginians, Iberians, Celtiberians, Vascons, Lusitanians, and Latins, between the sixth and first centuries BC. Additionally, the term carries linguistic implications, as it includes Gaulish coinages that used the Iberian script.

MIB provides a comprehensive typological catalogue accompanied by documentation on individual coins, hoards, and finds, all supported by an exhaustive bibliography. It describes more than 4,200 types issued by more than 220 cities/mints and displays more than 50,000 coins. The catalogue is also accessible through the ARCH portal. MIB is designed as a native digital collection, not a printed book in digital format.

This paper presents recent developments in the catalogue's statistical analysis features. A

comprehensive reference catalogue should provide statistical summaries of the most documented values: weight, diameter, and die axis position. To meet this requirement, we developed a dynamic analysis tool that calculates and displays statistical parameters for these three data categories (Fig. 1). The system performs calculations using JavaScript, with graphical representations implemented through the D3.js library.

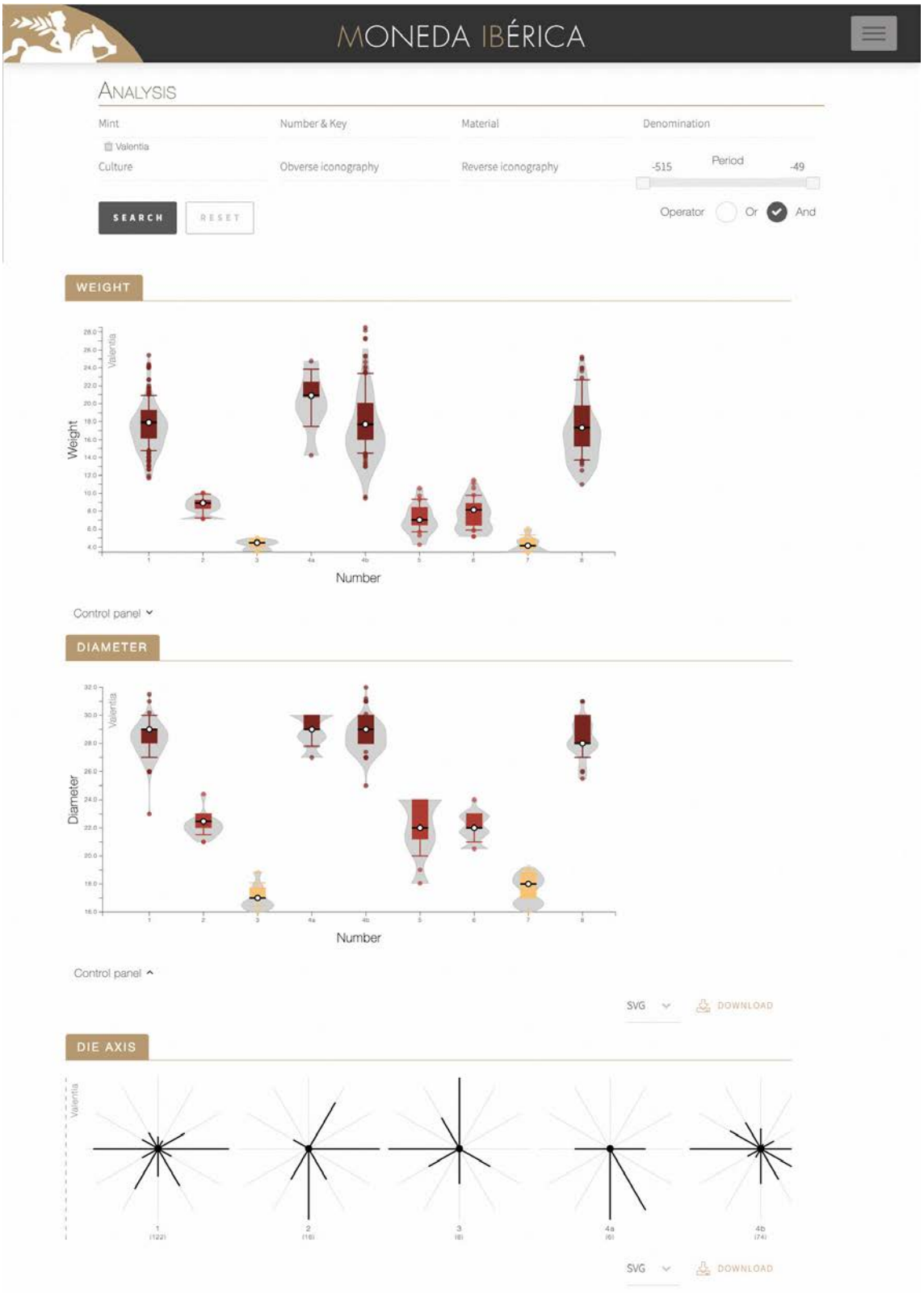


**Fig. 1.** Dynamic analysis tool interface showing statistical visualizations for weight and diameter (displayed as violin and box plots) and die axis position, with the mint filter set to Valentia.

The analysis tool generates three separate visualizations based on the selected filters. The first displays weight distributions as combined violin and box plots for all resulting types in a continuous sequence. The second shows diameter distributions, also as combined violin and box plots. The third presents die axis position distributions using a representation appropriate to angular data. For the weight and diameter visualizations, clicking a median dot displays detailed data for that type below the plots (Fig. 2). For die axis plots, clicking the center dot provides the same detailed view. Beyond the analysis tool, the catalogue itself integrates these statistics: each type page includes a statistical summary at the end, following the documented coins.

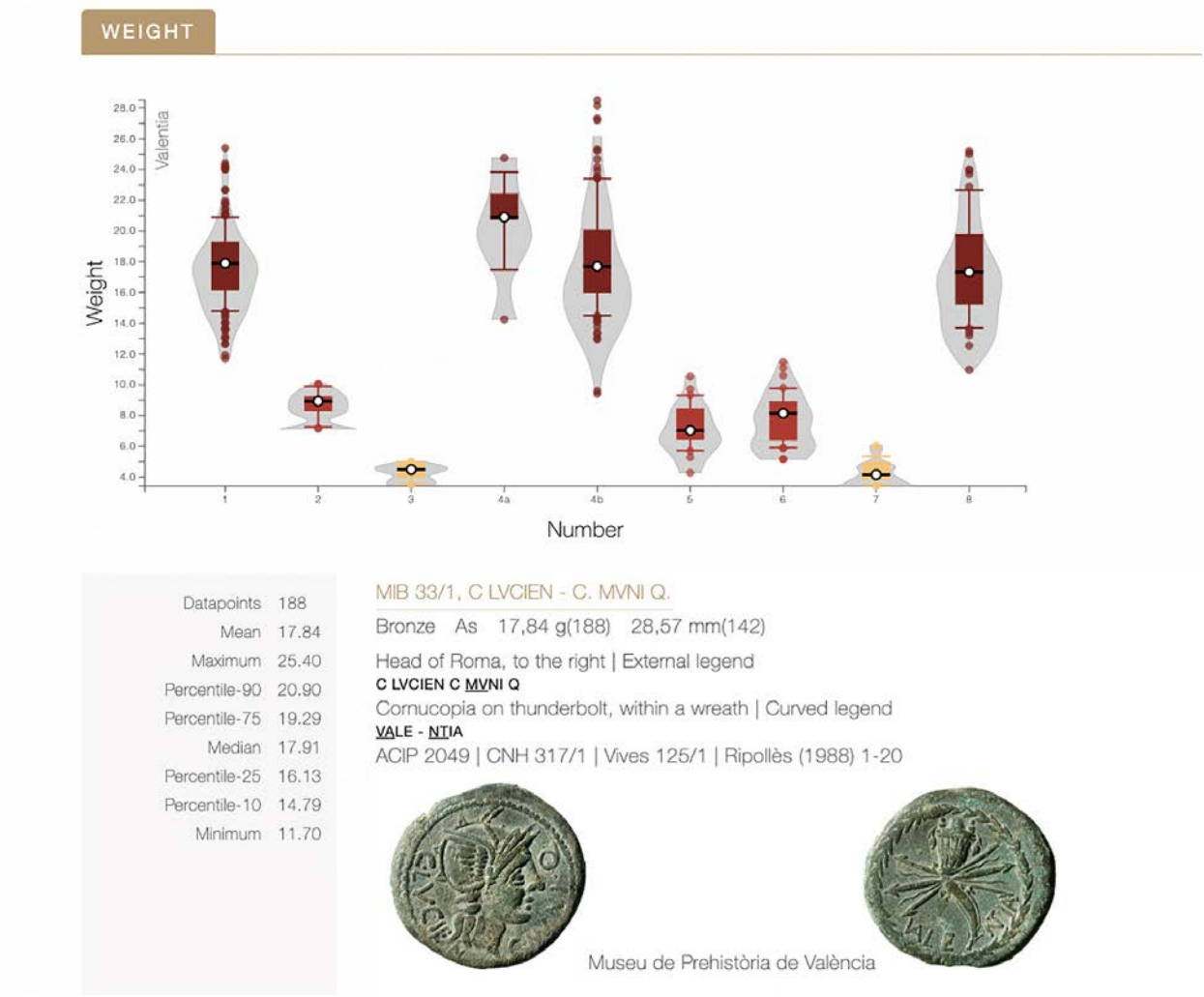


**Fig. 2.** Weight violin plots for coin types from Valentia, with a selected type's complete statistical data displayed below the visualisation.

We selected violin plots combined with box plot elements and specific summary statistics for visualising weight and diameter data. Violin plots integrate a box plot with a rotated kernel density plot on each side, where the width of each section is proportional to the number of data points in that range. This representation refines traditional histograms by estimating the underlying probability density function, providing a smooth approximation of the data sample. This approach is particularly suitable for numismatic datasets, as it simultaneously displays central tendency, spread, and the full distribution of measurements.

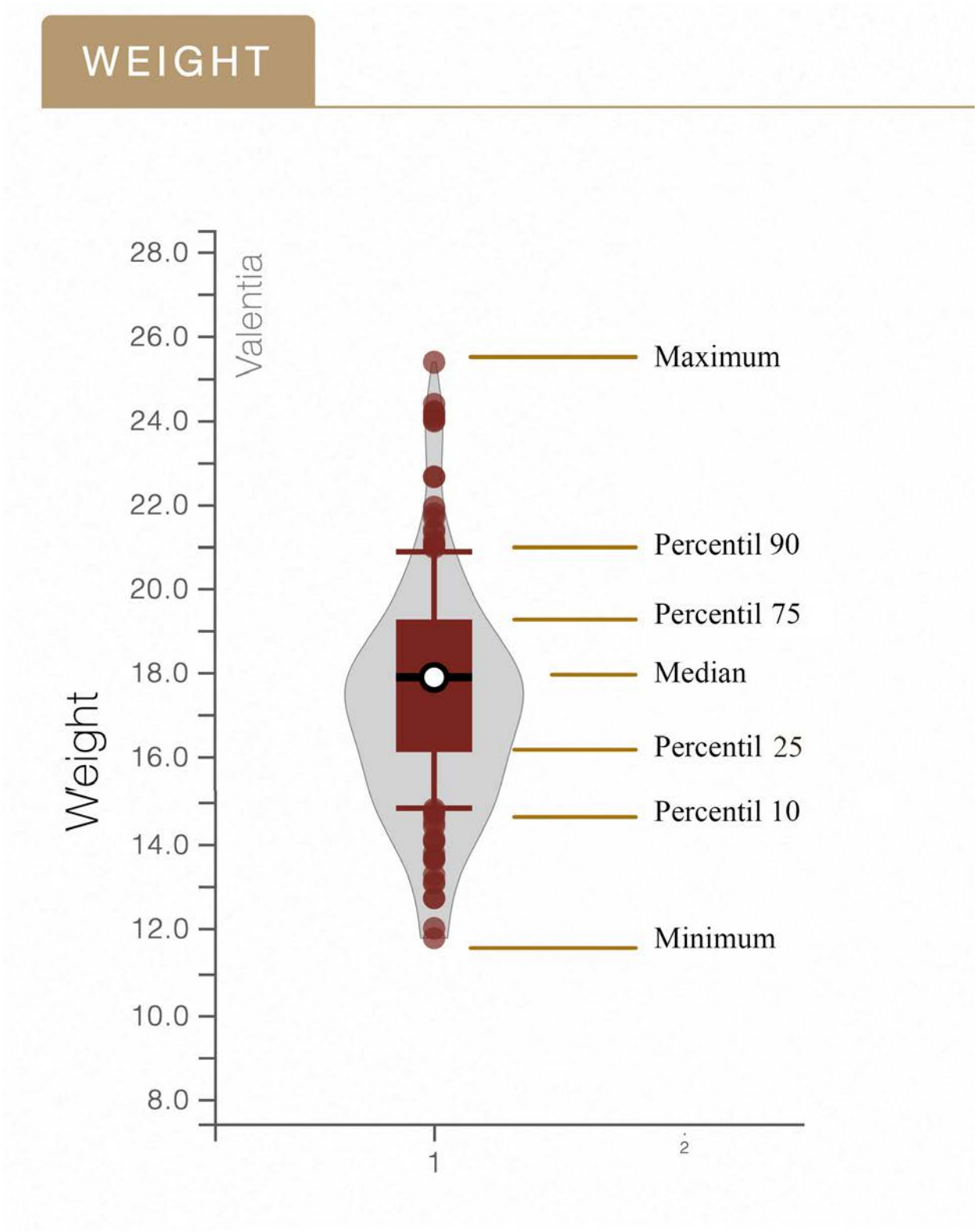


**Fig. 3.** Guide to interpreting violin plots in MIB, showing annotated statistical components for a Valentia coin type.

Figure 3 illustrates the specific elements of our implementation for weight and diameter data. The white dot represents the median, while the red box in the center shows the interquartile range (Q1 to Q3). The whiskers extend from the 10th to the 90th percentiles and are drawn as solid lines, with each whisker covering 15% of the distribution on its respective side of the box. Data points beyond the whiskers appear as outliers, identified using the interquartile range method. The kernel density estimation on each side shows the distribution shape: wider sections indicate higher probability regions, while narrower sections show lower probability areas.

The control panel allows users to customize the weight and diameter visualizations. Box plots and violin plots can be displayed separately or overlapping. Users can toggle gridlines to facilitate reading, adjust the width of boxes and violins, and show or hide specific components such as whiskers and outliers. For violin plots, eight shape variations are available, including Basis and Bump-Y representations. Beyond these global settings, selecting a specific type by clicking its violin or box reveals a type-specific customization menu where users can fine-tune the violin resolution, similar to adjusting bin size in histograms.

The diagrams also serve as a data quality control tool, revealing input errors that appear as extreme outliers. For example, misplaced decimal points in weight values or diameter measurements incorrectly entered in centimeters rather than millimeters are easily detected through the visualizations.

This development enhances the comprehensive digital catalogue that monedaiberica.org (MIB) provides for ancient coinages of the Iberian Peninsula, with the analysis tool now displaying statistical parameters for all types and variants.

**Bibliography**

Hintze, Jerry L. & Nelson, Ray D. (1998) Violin Plots: A Box Plot-Density Trace Synergism, The American Statistician, 52:2, 181 184, DOI: 10.1080/00031305.1998.10480559

Websites:

https://chartio.com/learn/charts/violin-plot-complete-guide/

https://d3js.org/.

https://ggplot2.tidyverse.org/reference/geom_violin.html

https://matplotlib.org/1.4.0/users/whats_new.html#violin-plots

https://mode.com/blog/violin-plot-examples

https://www.datanovia.com/en/lessons/ggplot-violin-plot/

https://www.itl.nist.gov/div898/software/dataplot/refman1/auxillar/kernplot.htm

https://www.itl.nist.gov/div898/software/dataplot/refman1/auxillar/violplot.htm

http://www.sthda.com/english/wiki/ggplot2-violin-plot-quick-start-guide-r-software-and-data-visualization

# The Funerary Use of 4th-Century Coins: Case Study Grave G-2456 (Viminacium)

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**Abstract:** In 2019, in the southern Viminacium necropolis (Više Grobalja site), the grave of an inhumed deceased (Grave G-2456) was discovered buried in a wooden coffin. Within the grave, four bronze coins of Constans and Constantius II with the same reverse legend were found. What makes this grave so special is the position of one of the coins on the right eye of the deceased, another one in her right hand, and two further coins in her left hand. This was the reason for conducting research on the remaining Viminacium graves in which coins had been found in the same positions.

**Keywords:** Coins, Funeral practice, Viminacium, 4th century.

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## Introduction*

Some of the reasons why the capital of the Roman province of Upper Moesia – Viminacium (the present-day Stari Kostolac in Serbia) – is known among scholars is because of its large number of excavated graves: they are dated from the Eneolithic all the way to the Middle Ages (15,000 graves). Certainly, the largest number of excavated graves dates into the Roman period, as the city and the legionary fort were surrounded with cemeteries (**Fig. 1**) (Vojvoda, Anđelković Grašar 2022, 13). Until the present day, the archaeologically confirmed and, to the greatest ex-

tent, excavated cemeteries are the southern, eastern, and northeastern ones, while the existence of the northern and western cemeteries is yet to be definitively confirmed.[1] Among the cemeteries dated into the period from the 1st to the early decades of the 5th centuries (the site of Burdelj and an area at the site Pećine),[2] those that were systematically published so far include some of the graves from the southern (the sites of Više Grobalja and Pećine) and the eastern Viminacium cemeteries (the site of Kod Koraba), in four volumes (Зотовић, Јордовић 1990; Korać, Golubović 2009; Golubović, Milovanović, Redžić 2022; Redžić, Golubović, Vojvoda, 2022.).

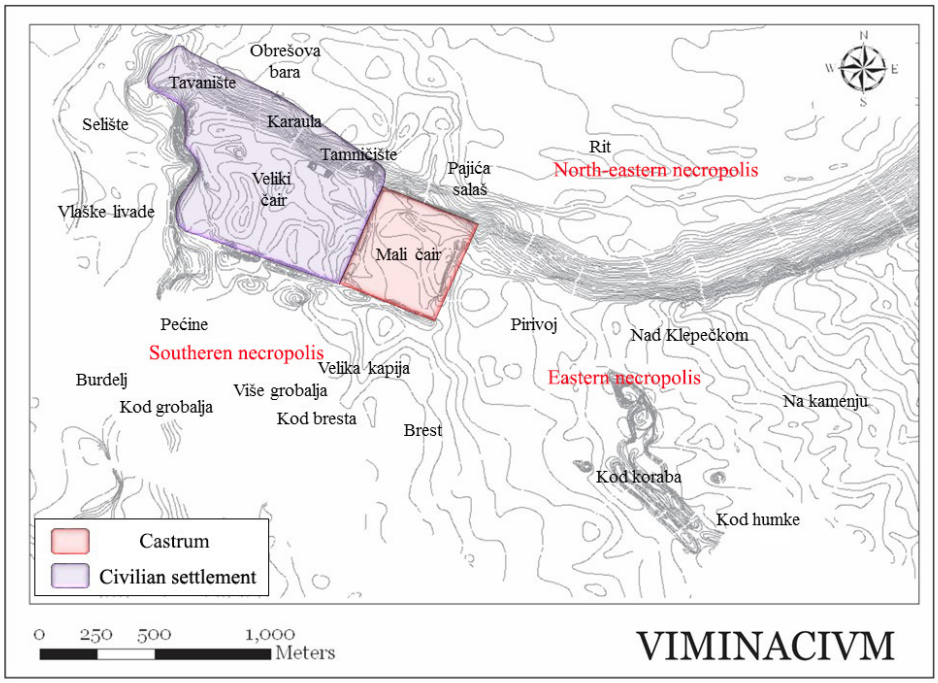


**Fig. 1.** General situation at the Viminacium site.

In the Roman cemetery that is situated to the south from the city and the legionary fort (the southern necropolis), several separate spatial burial units can be distinguished, with different chronologies, although this is not always the case. They are frequently separated from each other by spaces that contain no burials at all. This is why, within the southern cemetery, different separate burial areas were defined that contained graves from Late Antiquity. Due to the building activities of several parts of the Kostolac 2 thermopower plant, protective archaeological excavations in this area have been conducted for decades, only with short interruptions (from 1977 until the present day). Over time, certain regularities have been noticed that define the directions in which specific burial areas spread within the southern cemetery. Three directions have been clearly defined (**Fig. 2**), leading from the Roman legionary fort (one route from the southern gate) and the civilian settlement (two routes) towards the south, with cemeteries being formed around

* We would like to express our gratitude to Milica Tapavički-Ilić for her translation of the text and to Dave Calcutt for his proofreading.

[1] Until the end of the 19th century, to the north and west of the city and the legionary fort, isolated graves had been discovered, but those sites have not yet been systematically examined. In 1882, M. Valtrović (Валтровић 1884, 6, 10) conducted sondage excavations to the south, north, and east of the legionary fort, finding graves in all of the listed places. According to the grave remains plundered by the locals at that time, he concluded that there were graves also to the west of the city (Vojvoda, Golubović, Mikić 2021, 8, note 6).

[2] Within the separate burial area in the southern cemetery, at the site of Burdelj, Viminacium inhabitants were buried until the middle of the 4th century. Another area containing Late Roman graves is situated at the site of Pećine, which was used as a burial ground until the early decades of the 5th century. Here, Late Roman graves intersect the earlier, already abandoned areas with cremation and inhumation graves (Vojvoda, Golubović, Mikić 2021, 10).

them whose graves date from the end of the 1st to the end of the 4th centuries (Golubović, Milovanović, Redžić 2022, 79–80). The cemetery with Late Roman graves in rows – one of which is the subject of this paper – is located on the western side of one of the routes that started from the southeastern part of the settlement (the Više Grobalja site). Burials from the Late Roman period were also discovered along the other two routes (the sites of Pećine, Više Grobalja, and Brest-Korabe). Owing to the direction in which they spread, they were separated from the earlier burials within the same area, and there are only a few rare cases where older burials were damaged by later ones (Golubović, Milovanović, Redžić 2022, 80, 91).

During the Late Roman period, further south of the locations mentioned above, smaller burial areas were formed along vicinal roads that were connected to the already mentioned three main routes that led towards the city and the legionary fort (the site of Burdelj). Burials from the 4th century were also attested in the eastern Viminacium cemetery (the site of Pirivoj), as well as within the *castrum* itself (Nikolić, Marjanović, Stojić 2021, 15–40) and within the arena of the amphitheatre, which was previously abandoned (Nikolić, Bogdanović 2015, 554; Bogdanović, Rogić, Vuković-Bogdanović 2018, 47; Bogdanović 2019, 73).

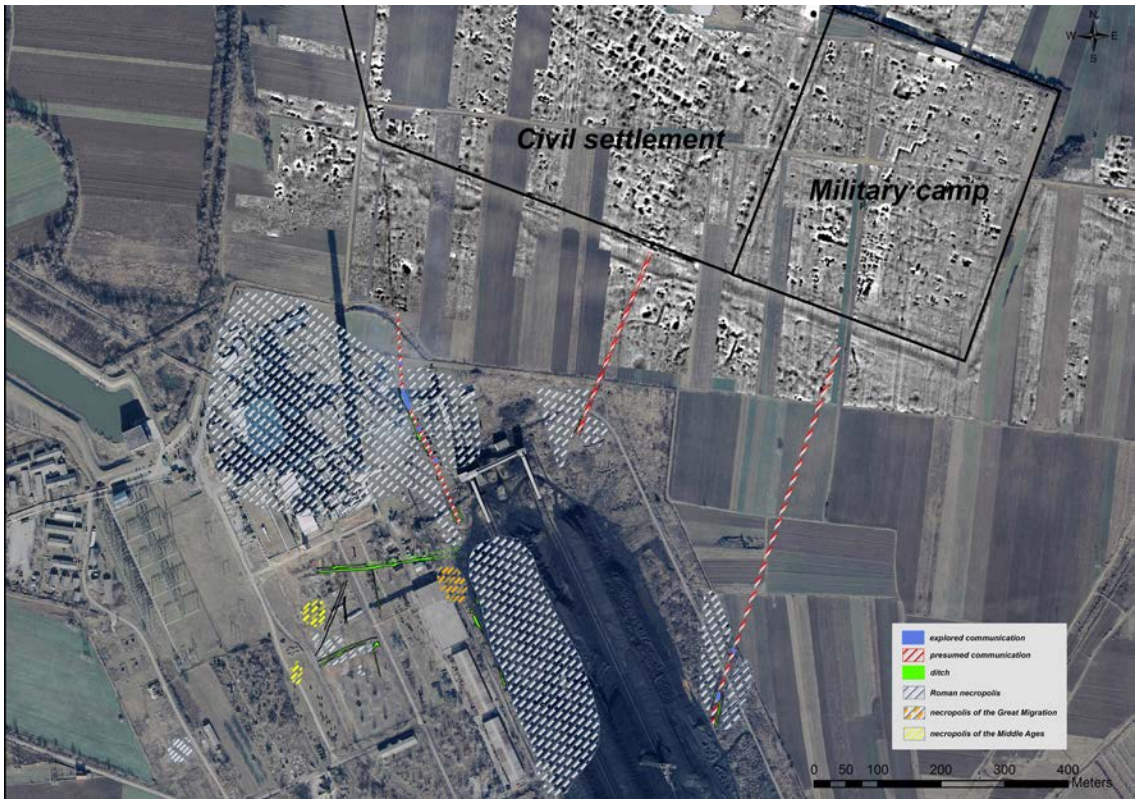


**Fig. 2.** Routes between the legionary fort and the settlement according to the position of cemeteries (after: Golubović, Milovanović, Redžić 2022, 79, Figure 3).

## Discussion

In 2019, within the part of the cemetery that was formed along the middle route leading from the civilian settlement (the site of Više Grobalja; **Fig. 2**), among the graves positioned in rows, an inhumation burial was excavated (Grave G-2456), with the deceased buried in a wooden coffin (**Figs. 3**–**4**). The skeleton of an elderly woman was discovered at a relative depth of 1.68 m, orientated in an east-west direction, with its eastern part deviating 5º towards the south. The deceased was placed in a supine position with her arms resting next to the body. Possibly due to soil weight, the head was turned slightly towards the right. The skeleton bones were well preserved, and the skeleton measured 1.68 m in length. Around the skeleton, six iron nails were discovered, belonging to the wooden coffin in which the body was buried. Based on the position

of the nails, the dimensions of the coffin have been reconstructed: it measured 1.80 x 0.60 m. Next to the deceased's left foot, a glass bottle was unearthed, as well as a silver-plated bronze mirror. In the stomach area, two chain links were discovered, while next to the left tibia there was a glass bead.

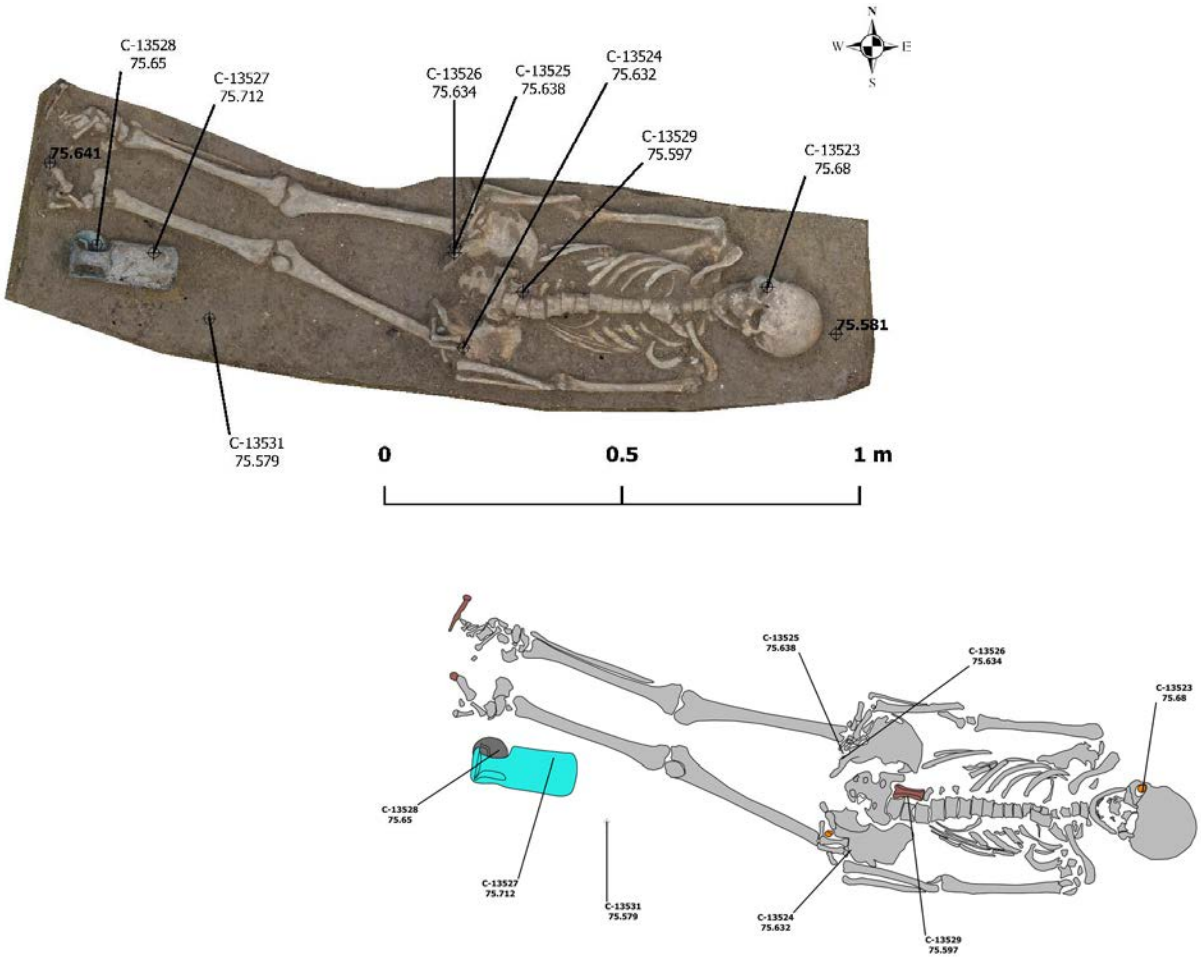


**Fig. 3–4.** Grave G-2456 with the deceased buried in a wooden coffin (Figures 1, 3–8 and photos Cat. nos. 1–4 belong to the documentation of the Archaeological Institute, Belgrade).

Besides the grave goods listed above, four bronze coins from the 4th century drew special attention. They were positioned on three different points of the body. One of them was placed on the deceased's right eye (Cat. no. 1; **Fig. 5**), the second one was in the left hand (Cat. no. 2; **Fig. 6**), while the remaining two were in the right hand (Cat. nos. 3–4; **Fig. 7**). All of the coins bore the same reverse legend (FEL TEMP REPARATIO); however, they had three different reverse images. Three of the coins belong to the issues of Constans and Constantius II, while ascribing the fourth coin to a specific emperor could not be done with any certainty. Nevertheless, according to the images represented on their reverse sides, all of the coins were dated into the period between the years AD 348 and 361.

**Fig. 5.** Detail of grave G-2456 (Cat. no. 1, coin to the deceased's right eye).

**Fig. 6.** Detail of grave G-2456 (Cat. no. 2, coin in the deceased's left hand).

**Fig. 7.** Detail of grave G-2456 (Cat. nos. 3–4, two coins in the deceased's right hand).

**Cat. no. 1 – Constantius II**

Bronze, struck, fraction of a follis

Weight 3.70 g, size 22.30 mm

**Obv.** D N CONSTAN-[TIVS P F AVG]

Bust draped, cuirassed, right, head diademed.

**Rev.** [FEL TEMP –REP]ARATIO // TS star

Helmeted soldier, spear in left hand, walking right, head left; leading a small bare-headed figure from a hut beneath a tree; the spear points downwards, between the soldier and the small figure (further: Falling horseman).

Mint of Thessalonica, RIC VIII, p. 412, no. 114

AD 348–350

Museum Viminacium inv. 04_574; Field inv. C-13523

Unpublished.

**Cat. no. 2 – Constantius II**

Bronze, struck, fraction of a follis

Weight 3.88 g, size 20.84 mm

**Obv.** D N CONSTAN-TIVS P F AVG

Bust draped, cuirassed, left, folding globe, head diademed.

**Rev.** [FEL TEMP] – REPARATIO // [.]M[.]

Emperor standing left, in right hand holding standard with Chi-Rho on the banner and resting left hand on shield; in front of him are two bound captives wearing pointed caps, standing facing, their heads turned towards one another.

Mint unknown, no reference

AD 348–355

Museum Viminacium inv. 04_04_575; field inv. C-13524

Unpublished.

**Cat. no. 3 – Constans**

Bronze, struck, fraction of a follis

Weight 4.04 g, size 22.20 mm

**Obv.** D N CONSTA–NS P F AVG

Bust draped, cuirassed, left, holding globe in right hand, head diademed.

**Rev.** FEL TEMP REPAR–ATIO // Illegible

Helmeted soldier, spear in left hand, walking right, head left; leading a small bare-headed figure from a hut beneath a tree; the spear points downwards, between the soldier and the small figure.

Mint unknown, no reference

AD 348–350

Museum Viminacium 04_468; field. inv. C-13525

Unpublished.

**Cat. no. 4 – Constantius II or Constans?**

Bronze, struck, fraction of a follis

Weight 4.04 g, size 22.20 mm

**Obv.** Illegible

Bust right

**Rev.** Illegible

Falling horseman.

Mint unknown, no reference

AD 348–361

Museum Viminacium inv. 04_576; field inv. C-13526. Unpublished.

Compared to the previously discovered Viminacium graves, the grave described here is unique, mostly because of the position of a coin on the eye of the deceased. Across all of the Viminacium cemeteries, this coin position occurs extremely rarely – not only from the 4th century, but also from earlier periods. In another grave (Pećine, Grave G-5900) made of vertically positioned bricks forming a coffin, the deceased was laid on their back, their left arm bent at the elbow and placed upon the pelvis, while the right one was stretched next to the body. A bronze coin was found between the eyes (fraction of a follis, Divus Constantine I, struck during his sons' reign from AD 337 to 348). It can be presumed that it was possibly placed on the left eye, but over a period of time and due to the fact that the head turned slightly to the right, the coin slid from the eye and ended up being positioned between the eyes, closer to the right one (**Fig. 8**). Besides the coins, a double-sided bronze buckle with an elliptic ring was unearthed, positioned between the legs and next to the left tibia. There is only one other example known of a triple perforated bronze coin discovered on the left eye of the deceased deposited directly into the grave pit without any structure (the site of Pećine, Grave G-1827).[3] Among the grave goods from the grave mentioned above, there was also a ceramic pot, deposited next to the lower leg (Vojvoda 2018, 68; Cattelain 2023, 85). The perforated coin is illegible, and it is only certain that it is a dupondius from the period of the Julio-Claudian dynasty (Vojvoda, Mrđić 2017, 351, Cat. no. 2266). However, although the coin belongs to an early period, the grave itself is most likely from the 3rd century, with the coin having been in use over a longer period of time. In the Viminacium cemeteries, finds of coinage from the 1st century within graves dated into the 3rd century appear rarely, but this case is definitely not an isolated one (Vojvoda, Mrđić 2015, 28–29).

[3] Unfortunately, a sketch of Grave G-1827, which was explored in 1982, does not exist.

**Fig. 8.** The grave G-5900, Pećine site.
A coin between the eyes of the deceased.

In the cemeteries of Viminacium, examples of burials with a single coin in the left or right hand appear much more often, while finds of coins in both hands, as in Grave G-2456, are only a few in number; they are all dated into the first half of the 4th century. This category could possibly also include a grave from the site of Pećine (Grave G-1021) in which two coins were found beneath the left hand. It should be mentioned that the left hand was positioned over the right one, and both were placed on the pelvis. The coins belong to the minting of Constantine I from the year 335–336 and Constantius II from the year 335–340 (Vojvoda, Mrđić 2017, 251, Cat. no. 1375; 277, Cat. no. 1566). During recent excavations on the same site, in a grave of a child deposited into a simple burial pit with their hands placed upon the pelvis (site Pećine, Grave G-5750), there were two poorly preserved coins from unknown mints in the left hand: a follis of Constantine I of the *urbs Roma* type, minted in the period between 330–337 and a follis of Constantinus II of the *gloria exercitus* type, with two standards and minted between the years 333 and 336 AD. Two coins in the right hand were also found within the grave of an adult deposited into a simple pit with the hands crossed over the pelvis (site Pirivoj, Grave G-224). The first one is a follis of Constantine I, minted in the Trier mint in the year AD 323–324(RIC VII, 201, no. 429), while the second one is a follis of Crispus from the Sirmium mint, minted in the year AD 324–325(RIC VII, 475, no. 49). Besides the examples listed here, we can also mention the grave of an infant, constructed out of vertically positioned bricks (site Više Grobalja, Grave G-2317). The hands of the deceased were placed upon the pelvis and between them there were four bronze coins. Due to the poor state of preservation of the deceased's bones, it was not possible to determine how many coins were placed in each hand or if they were all placed in a single hand. All four coins represent fractions of a follis with an image of the 'falling horseman' type on the reverse. Two belong to the issues of Constantius II from the Sirmium mint, dated into the period from AD 351 to 355 (RIC VIII, 387, no. 48). The third one belongs to the imperial issues of Constantius Gallus from an unknown mint, struck between the years AD 351 and 355. Due to the poor state of preservation, it is not possible to ascribe the fourth coin to any of the two co-rulers with any certainty, but it definitely belongs to the issues of the Thessaloniki mint from the same chronological span as the previous three coins. There is a somewhat clearer situation with the grave of an infant deposited into a simple grave pit, Grave G-430 (site Pirivoj), whose hands were positioned next to the body. Although the hand of the right arm is missing, it is certain that the four coins, discovered on the right pelvis side and in the suspected right hand position, can be considered to have been placed in the hand itself. One

of the coins is a follis of Constantine I, minted between the years AD 330 and 333 (commemorative Constantinopolis issues, the mint of Thessaloniki?), while the remaining three belong to the issues of his sons (Constans or Constantius II?). Two of them bear the same reverse legend VICTORIAE DD AVGGQ NN and the image of two Victorias, one minted in the Thessaloniki mint and the second one in the Siscia mint, struck in the year 347–348. The fourth coin (of Constans?) is a *gloria exercitus* type with two standards, minted between the years AD 333 and 336.

As already mentioned, examples of burials with a single coin in either the left or right hand of the deceased are encountered much more often. Still, one needs to be much more careful in such situations, since it is often difficult to determine in which hand the coin was actually placed, especially when the hands are crossed and placed upon the pelvis or when the hand bones or those of the entire lower arms are missing, and the coins were still discovered upon the pelvis in a position where one would actually expect the missing hand. This is why in the table below, sites with graves were distinguished in which there was only a single coin find in the right or left hand, as well as those cases in which it was not possible to determine in which of the two hands it was placed. To date, 33 deceased have been classified with only a single coin find. Among them, in 17 graves, coins were placed in the right hand, in eight graves they were put into the left hand, while in eight graves it was not possible to specify in which hand the coin was placed (**Table 1**).

**Table 1.** Graves from the Viminacium cemeteries with a single coin find in the deceased's hand.

| Necropolis | Grave no. | Coin in right hand | Coin in left hand | in hands ? | Coin | Date |
|---|---|---|---|---|---|---|
| Southern necropolis, site Pećine | G-366 | * | | | Constantine I<br>Follis,<br>Mint of Siscia<br>RIC VII, p. 452, no. 214<br>Published: Vojvoda, Mrđić 2017, 250, Cat. no. 1372 | 326–327 |
| Southern necropolis, site Pećine | G-895 | * | | | Vespasian<br>As, Mint of Rome<br>No reference<br>Published: Vojvoda, Mrđić 2017, 110, Cat. no. 126 | 69–79 |
| Southern necropolis, site Pećine | G-905 | * | | | Gordian III<br>AE provincial, Mint of Nicaea<br>RPC does not have; Vojvoda 2023, 116, no. II.3/3 (no. 3) | 238–244 |
| Southern necropolis, site Pećine | G-938 | * | | | Trajan Decius<br>AE provincial, Mint of Viminacium<br>RPC IX online https://rpc.ashmus.ox.ac.uk/coins/9/1<br>Published: Vojvoda, Mrđić 2017, 434, Cat. no. 3244 | 249–250 |

| Necropolis | Grave no. | Coin in right hand | Coin in left hand | in hands ? | Coin | Date |
|---|---|---|---|---|---|---|
| Southern necropolis, site Pećine | G-1188 | * | | | Helena, striking under Constantine I<br>Follis, Mint of Sirmium<br>RIC VII, p. 475, no. 54<br>Published: Vojvoda, Mrđić 2017, 257, Cat. no. 1430 | 324–325 |
| Southern necropolis, site Pećine | G-2935 | * | | | Domitian<br>Dupondius or as (?), Mint of Rome<br>No reference<br>Published: Vojvoda, Mrđić 2017, 118, Cat. no. 204 | 85–96 |
| Southern necropolis, site Pećine | G-5579 | * | | | Bronze coin, lost<br>Published: Vojvoda, Mrđić 2017, 497, Table 1 | ? |
| Southern necropolis, site Pećine | G-3512 | * | | | Hadrian<br>AE provincial, Mint unknown<br>No reference<br>Published: Vojvoda, Mrđić 2017, 440, Cat. no, 3295 | 117–138 |
| Southern necropolis, site Pećine | G-5861 | * | | | Severus Alexander<br>AE provincial, Mint of Nicaea<br>Unpublished | 222–235 |
| Southern necropolis, site Više grobalja | G-2224 | * | | | Unknown, broken<br>AE<br>Unpublished | 4th c. ? |
| Southern necropolis, site Više grobalja | G-2362 | * | | | Septimius Severus<br>AE provincial, Mint unknown<br>Unpublished | 193–211 |
| Southern necropolis, site Više grobalja | G-2402 | * | | | Unknown<br>AE provincial, Mint unknown<br>Unpublished | 1/2 3rd c. |
| Southern necropolis, site Više grobalja | G-2804 | * | | | Aurelian<br>Antoninianus, Mint unknown<br>Unpublished | 270–275 |
| Southern necropolis, site Više grobalja | G-2860 | * | | | Commodus<br>As, Mint of Rome<br>RIC III, p. 431, no. 568<br>Unpublished | 190 |
| Eastern necropolis, site Pirivoj | G-137 | * | | | Constantine I (VRBS ROMA)<br>Follis, Mint unknown<br>Unpublished | 334–335 |
| Eastern necropolis, site Pirivoj | G-246 | * | | | Unknown<br>AE provincial, Mint unknown<br>Unpublished | 1/2 3rd c. |

| Necropolis | Grave no. | Coin in right hand | Coin in left hand | in hands ? | Coin | Date |
|---|---|---|---|---|---|---|
| North-eastern necropolis, site Nad Klepečkom | G-84 | * | | | Commodus<br>As, Mint of Rome<br>Unpublished | 180–192 |
| Southern necropolis, site Pećine | G-117 | | * | | Domitian (?)<br>AE provincial, Koinon of Macedonia<br>No reference<br>Published: Vojvoda, Mrđić 2017, 424, Cat. no. 3139 | 85–96 (?) |
| Southern necropolis, site Pećine | G-978 | | * | | Philip II<br>AE provincial, Mint of Viminacium<br>RPC VIII online https://rpc.ashmus.ox.ac.uk/type/2276<br>Published: Vojvoda, Mrđić 2017, 433, Cat. no. 3236 | 244–245 |
| Southern necropolis, site Pećine | G-2585 | | * | | Probus (?)<br>Antoninianus, Mint unknown<br>No reference<br>Published: Vojvoda, Mrđić 2017, 344, Cat. no. 2163 | 276–282 (?) |
| Southern necropolis, site Pećine | G-2645 | | * | | Divus Constantinus I<br>Follis, Mint unknown<br>No reference<br>Published: Vojvoda, Mrđić 2017, 261, Cat. no. 1454 | 337–340 |
| Southern necropolis, site Pećine | G-4456 | | * | | Unknown<br>Dupondius or as (?), Mint unknown<br>No reference<br>Published: Vojvoda, Mrđić 2017, 375, Cat. no. 2641 | 2nd c. (?) |
| Southern necropolis, site Pećine | G-5268 | | * | | Unknown<br>Dupondius or as (?), Mint unknown<br>No reference<br>Published: Vojvoda, Mrđić 2017, 376, Cat. no. 2643 | 2nd c. (?) |
| Southern necropolis, site Više grobalja | G-2832 A | | * | | Unknown<br>AE, Mint unknown<br>Unpublished | 3rd c. (?) |
| Southern necropolis, site Više grobalja | G-2832 B | | * | | Severus Alexander<br>AE provincial, Mint of Nicaea<br>Unpublished | 222–235 |

| Necropolis | Grave no. | Coin in right hand | Coin in left hand | in hands ? | Coin | Date |
|---|---|---|---|---|---|---|
| Southern necropolis, site Više grobalja | G-2320 | | | * | Constantius II<br>Fraction of a follis, Mint unknown<br>Unpublished | 348–361 |
| Southern necropolis, site Više grobalja | G-2802 | | | * | Aurelian<br>Antoninianus, Mint unknown<br>Unpublished | 270–275 |
| Southern necropolis, site Burdelj | G-21 | | | * | Septimius Severus<br>AE provincial, Mint unknown<br>Unpublished | 193–211 |
| Southern necropolis, site Burdelj | G-36 | | | * | Severus Alexander<br>AE provincial, Mint of Nicaea<br>Unpublished | 222–235 |
| Eastern necropolis, site Pirivoj | G-347 | | | * | Unknown<br>As, Mint of Rome<br>Unpublished | 2/2 1st c. (?) |
| Northen necropolis, site Rit | G-47 | | | * | Unknown<br>As, Mint of Rome<br>Unpublished | 2nd c. |
| Eastern necropolis, site Kod koraba | G-16 | | | * | Gordian III<br>AE provincial, Mint of Nicaea<br>RPC VII online https://rpc.ashmus.ox-.ac.uk/coins/7.2/1968<br>Published: Vojvoda, Golubović, Redžić 2021, 67, Cat. no. 48 | 238–244 |
| Eastern necropolis, site Kod koraba | G-48 | | | * | Severus Alexander<br>AE provincial, Mint of Nicaea<br>RPC VI online https://rpc.ashmus.ox.ac.uk/coins/6/3202<br>Published: Vojvoda, Golubović, Redžić 2021, 66, Cat. no. 43 | 222–235 |

The analysis of coin finds from inhumation burials was conducted on most of the discovered graves of the southern Viminacium cemeteries (the sites of Više Grobalja and Pećine) and, to a lesser extent, of the eastern necropolis (the site of Kod Koraba). It showed that the presence of a single coin within a grave is the most frequent situation – 89% at the sites of Više Grobalja and Pećine and 88.20% at the site of Kod Koraba (Redžić, Golubović, Vojvoda 2022, 81, Table 4). Since we are particularly interested in the position of coins within graves and in relation to the position of the deceased, the analysis mentioned earlier made it possible for us to understand that in cases of single coin finds within graves, in most cases it was positioned within the mouth (32.60% for Više Grobalja, 24.20% for Pećine, and 26.66% for Kod Koraba), then around the deceased's head (26.10% for Više Grobalja, 15.35% for Pećine, and 6.66% for Kod Koraba), on the chest (10.50% for Više Grobalja, 10.92% for Pećine, and 20% for Kod Koraba), on the pelvis (6.12% for Više Grobalja, 7.34% for Pećine, and 20% for Kod Koraba), and on or next to either the right or left hand (in the same percentage for the left and the right hand 3.32% in Više Grobalja; the right hand 6.47% and the left hand 5.50% in Pećine, and noted only next to the left hand 6.67% of the time in Kod Koraba). Inhumations where several coins were found were noted to a much

lesser extent. Additionally, they have different position combinations in regard to the deceased.[4]

Based on the situation in the field, these results must be interpreted with a certain amount of caution. In some situations where coins were unearthed next to the skull, one must take into consideration that it is possible that the coins slipped down to the eye. In such cases, and regarding the percentage of coins found next to the head, the position of coinage on the eye could be considerably bigger. The same could be true with the position of coins discovered on the pelvis or chest, in cases when the hands were placed in one of these two positions and in cases when, due to the poor state of preservation of the osteological finds, the hands are missing.

Since the subject of this paper is the grave (Grave G-2456) with four coins, we will only consider the analysis of other Viminacium inhumation graves that revealed the same number of monetary finds. Four coins were found in each of the nine graves from the southern cemeteries (the sites of Više Grobalja and Pećine), placed in eight different positions. One of the positions was repeated only once. In six graves, all of the coins were discovered together, in one single spot, and as follows: next to the right hand, on the chest, on the pelvis, next to the right leg and, in two graves, close to the feet. In three graves with four monetary finds, different coin positions were noted: three coins around the head – one within the mouth; three coins next to the feet – one next to the left hand; next to the head – next to the left hand – next to the feet (Vojvoda, Mrđić 2015, 23; Vojvoda, Mrđić 2017, 26).

## Conclusion

We shall first consider the custom of burying the deceased with coins placed on their eyes which, according to literature at our disposal, has not been examined sufficiently, nor is it frequently represented in the Roman provinces in the Balkans. An example is known from Bulgaria (the site of Tegra, present-day Marten, 10 km to the northeast of the town of Ruse), in which within the grave of a deceased placed in a simple grave-pit and laid on their left side, a coin struck under Valens was found on the left eye.[5] Similar examples of burials with coins placed on one or even both eyes of the deceased are much more common in the western provinces of the Roman Empire, such as Belgia, Gaul, Germania, and Italia. In these territories, this phenomenon is usually dated into the period of the 3rd and the 4th centuries (Cattelain 2023, 85–86). We learn from historical sources that there was a tradition of closing the deceased's eyes, but this was performed manually and the use of coinage for such purposes is never mentioned. Pliny the Elder considers this custom to be a very important one, explaining that its aim was for the living not to see the open eyes of the deceased, but also that they open for one last time on the funeral pyre, prior to cremation (Pliny, *NH* XI.55). Quotes by Valerius Maximus reveal that people expected the closest relatives to perform the task of closing the eyes (Valerius Maximus, *Memorable Doings and Sayings*, 2.6.8). Lucan also writes that Caesar's soldiers during the Civil War claim: '…and from looking in vain for a hand to close our dying eyes.' (Lucan, *The Civil War*, V.280).

Contrary to our knowledge related to the Roman period, which is modest, we possess much more data regarding this custom during the 19th century, which was widely practised on almost all of the continents and originated from Europe. On the one hand, the eyes of the deceased were closed with coins in order not to open again, since it was believed that a deceased with their eyes open could take someone along with them. On the other hand, closing the eyes with coins enabled the deceased to sleep peacefully (Cattelain 2023, 88). However, besides the interpretations mentioned here, one cannot neglect the fact that this also represented a cosmetic action. The eyes of the deceased were usually closed by hand; however, due to muscle stiffness, they usually re-opened again on their own. In order not to make such a sight upset relatives and friends of the deceased, silver coins were usually placed over the eyelids, since they were heavy enough to

[4] For detailed data about the position of coins in regard to the deceased from the sites of Više Grobalja, Pećine and Kod Koraba cf. Vojvoda, Mrđić 2015, 21–24, Graph 7; Vojvoda, Mrđić 2017, 21–24, Graph 6; Redžić, Golubović, Vojvoda 2022, 82, Graph 12.

[5] We are truly grateful to our colleague Nikola Rusev from Bulgaria for sharing with us the information about the aforementioned grave.

keep the eyes closed until the burial.

The tradition of burying the deceased with coins in their hand occurs somewhat more often and usually involves only a single coin, rarely two, or sometimes even a few coins. During the Roman period in Gaul, coins deposited in the hand appear in some 10% of all cases (Doyen 2023, 22). A single coin in a grave is usually interpreted as 'Charon's obol.' As the research conducted until the present-day on Viminacium cemeteries has confirmed, this custom was attested with graves from the 1st and the 2nd centuries, as coins were placed either in the mouth or close to the head of the deceased. During the 3rd and especially in the 4th centuries, this custom was replaced by depositing coins (one or two of them) into the hands of the deceased, most likely with the same purpose. Regarding the presence of two coins, in our case placed in the deceased's hand, they can be connected to the myth of Psyche's journey into the Underworld, for which she needs one coin for the outbound and one coin for the return journey (Golubović, Milovanović, Redžić 2022, 49; Gãzdac-Alföldy, Gãzdac 2013, 299–300).

The use of coins for funerary purposes is interpreted differently but, in any case, it is related to the journey of the deceased into the Underworld. We shall here mention the most important interpretations.

The first, and most common, interpretation is that the coins were used to pay Charon, whose task was to transport the dead over the River Styx or Acheron into Hades. This custom was noted in the middle of the 5th century BC in Greece. The so-called Charon's obol was usually placed within the mouth, close to the head of the deceased (Nikolakopoulou 2019, 339–340), or in their hand (Delgado 2023, 54). However, this was not the usual custom that was performed equally in all parts of ancient Greece. It seems that such a funerary practice was accepted only by one part of the population. During the Classical and Hellenistic periods in Abdera for example, it was noted that people with a higher social status followed this custom more often, using gold or silver coins for this purpose and less frequently those made of bronze. On the other hand, the middle- and lower-class people did not have coins to spare or considered this custom not to be crucial for the blessed afterlife (Kallintzi, Chatziprokopiou 2019, 439–440; Korka, Lagos 2019, 60). This custom was also practised by the Romans, but they mostly used bronze coins of less value or much older coins that had lost their value long before (Korka, Lagos 2019, 60). However, as was already described with the example of the Viminacium cemeteries, in Roman times, this custom was practised only by a fraction of the city's population.

Following the *pars pro toto* principle, several coins within a single grave were considered a symbol of wealth, therefore highlighting the status of the deceased during their lifetime (Borza 1955, 142; Stevens 1991, 220; Alföldy-Găzdac, Găzdac 2013, 296, Vojvoda, Mrđić 2017, 77). Usually in such graves there were also other grave goods besides coins, whose quantity and quality also expressed the deceased's wealth (Andújar Suárez, Blázquez Cerrato 2019, 96). The presence of a larger number of coins in the Viminacium graves, especially when they are placed in a single spot, could be understood as the need for the deceased to cover the expenses in the Underworld (*viaticum*). These coins were usually deposited in a pouch (*marsupium* or *crumina*) for the deceased and they were either for him/her to cover the expenses in the afterlife or to display the deceased's social status. A good example for this includes small or large groups of coins (hoards) in some of the Viminacium graves that may include seven to 13 pieces (15 mini hoards) and from 22 to 88 pieces (six hoards). Within these, ten hoards end with coins minted in the 4th century, while four hoards end with those minted at the beginning of the 5th century (Vojvoda, Mrđić 2017, 27–48).[6] However, it appears that coin hoards in 4th century graves more likely represent an indication of the deceased's social status and prestige rather than a payment for Charon.

In total, the analyses performed so far have indicated that the custom of depositing coins in graves was practised only by a fraction of the Viminacium population: approximately one third

[6] The tradition of depositing larger numbers of coins in graves (coin hoards), usually in pouches around the deceased's waist, is typical of the period from the second half of the 3rd century onwards, through the entire Late Roman period (cf. Stivens 1991, 225–226, notes 24–25, 27).

of it, if one considers both inhumations and cremations.[7] At the same time, at both sites of the southern cemetery (Više Grobalja and Pećine), it was noted that coins were deposited in a much larger percentage in cremations than in inhumations.[8] Similar results were gained after the analysis of a portion of graves from the eastern cemetery (Kod Koraba).[9] Basically, in the sample of a total of 7,917 graves with inhumations (of the total of around 9,000 graves examined in Viminacium), we concluded that coins as grave goods were deposited in 19% of them. However, one should consider the possibility that this number is not completely reliable, since a large number of graves, especially those of the Late Roman period, were plundered during Antiquity. As shown with finds from parallel cemeteries and even allowing for the degree of caution, the percentage of coinage within graves could have not been drastically bigger than that stated here (Vojvoda, Mrđić 2015, 12, note 8; Vojvoda, Mrđić 2017, 12–13, n. 11). In any case, according to the monetary finds analyses from Viminacium, it can be concluded that the presence of a larger number of coins within graves was not a frequent occurrence, but in cases when it did occur, it was typically in the Late Roman period.

**Bibliography**

Sources:

Lucan, The Civil War, Books I–X (Pharsalia). Translated by J. D. Duff, London-Cambridge Mass. 1962.

Pliny, NH – Pliny the Elder, The Natural History. Translated by H.T. Riley, London 1855.

Valerius Maximus. Memorable Doings and Sayings, Volume II: Books 6–9. Edited and translated by Shackleton Bailey D. R., Loeb Classical Library 493, Cambridge Mass. 2000.

Secondary literature:

Валтровић, М., 1884. Откопавања у Костолцу. Старинар I, 6, 10.

Зотовић, Љ., Јордовић, Ч., 1990. Viminacivm I. Некропола „Више Гробаља". Археолошки институт, Републички завод за заштиту споменика културе, Београд.

Alföldy-Găzdac, Ă., Găzdac, C., 2013. Who Pays the Ferryman? The Testimony of Ancient Sources on the Myth of Charon. Klio 95.2, 285–314.

Andújar Suárez, A., Blázquez Cerrato, C., 2019. Coin Find in Roman Child Burials. Journal of Archaeological Numismatics 9, 89–123.

Bogdanović, I., 2019 – Izgradnja rimskog amfiteatra na primeru Viminacijuma, nepublikovana doktorska disertacija, Beograd.

Bogdanović, I., Rogić D., Vuković-Bogdanović S., 2018. The amphitheatre of Viminacium, in: Korać M., Pop-Lazić S., (eds.), Roman Limes and Cities on the Territory of Serbia, Serbian Academy of Sciences and Arts, Institute of Archaeology, Belgrade, 44–50.

Borza, H., 1955. Le Mythe de l'obole de Charon et le symbolisme actuel de la monnaie dans le cercueil. Orbis 4, 134–148.

Cattelain, L., 2022. La place des monnaies dans les rites de fermeture des yeux de l'Antiquité à nos jours, Poster présenté dans le cadre des Journées d'Archéologie wallonne le 24 novembre 2022 à Beez.

[7] Regardless of the seemingly low percentage of coins as grave goods in the Viminacium graves, they are actually much higher when compared to analogous cemeteries with known analyses (cf. Vojvoda, Mrđić 2015, 12, note 8; Vojvoda, Mrđić 2017, 12–13, note 11).

[8] The percentage of graves containing coins: Više Grobalja – 33.74%, among which: inhumations 28.08% and cremations 42.82%; Pećine – 19.13%, among which: inhumations 14.93% and cremations 39.63%. For data regarding the number of coins from graves of the southern cemetery cf. Vojvoda, Mrđić 2015, 11–12, Table 3; Vojvoda, Mrđić 2017, 11–12, Table 3.

[9] Whereby the percentage of all of the graves containing coins is 23.33%, among which: inhumations 21.80% and cremations 24.25% (cf. Redžić, Golubović, Vojvoda 2022, 80, Table 1).

Cattelain, L., 2023. Coins on the Eyes: A Brief Analysis of Selected Examples, in: Delgrado N. C. (ed.), Il valore dei gesti e degli oggetti. Monete e altri elementi in contesti funerari, Sesto Fiorentino, 85–92.

Danković, I., Marjanović M., 2022. Woman, Wife, Mother: Everyday life of Female Residents in Viminacium, in: Vojvoda M., Danković I., Milovanović B. (eds.), VIVERE IN VRBE VIMINACIVM, Vol. I. Archaeological Institute, Belgrade, 203–282.

Delgado, N., C., 2023. Coins in Late Roman and Early Medieval Tombs in Northern Italy: Some Notes on an Archaeological and Numismatic Problem, in: Delgrado N. C. (ed.), Il valore dei gesti e degli oggetti. Monete e altri elementi in contesti funerari, Sesto Fiorentino, 53–64.

Doyen, J-M., 2023. La monnaie dans la tombe, hier et aujourd´hui, ici et ailleurs: identité de gestes – pluralité de raisons, in: Delgrado N. C. (ed.), Il valore dei gesti e degli oggetti. Monete e altri elementi in contesti funerari, Sesto Fiorentino, 15–30.

Golubović, S., Milovanović B., Redžić S., 2022. Viminacium – Lokalitet Pećine, nekropola oko južne gradske komunikacije, Arheološki institut, Beograd.

Kallintzi, C., Chatziprokopiou K., 2019. The Burial Coin in Abdera. Journal of Archaeological Numismatics 9, 423–443.

Korać, M., Golubović, S., 2009. Viminacium. Više grobalja, Tom 2, Arheološki institut, Beograd.

Korka, E., Lagos, C., 2019. Numismatic Grave Finds of the Tenea – Chiliomodi Excavation Project 2013–2017. Journal of Archaeological Numismatics 9, 49–69.

Milovanović, B., 2016. Inhumacija djece na nekropoli Više grobalja antičkog Viminacija / Skeletal graves of children from the necropolis Više grobalja of ancient Viminacium. Vjesnik Arheološkog muzeja u Zagrebu 3, XLIX, 95–122.

Nikolakopoulou, A., G., 2019. The Custom of „Charon's Obol" in the Peloponnese. Journal of Archaeological Numismatics 9, 337–348.

Nikolić, S., Bogdanović, I., 2015. Recent Excavation on the Amphitheatre of Viminacium (Upper Moesia), in: Vagalinski L., Sharankov N., (eds.), Proceedings of the 22nd International Congress of Roman Frontier Studies, Ruse, Bulgaria, September 2012, National Archaeological Institute with Museum Bulgarian Academy of Sciences, Sofia, 547–555.

Nikolić, S., Marjanović M., Stojić G., 2021. The Necropolis Along the North-Western Corner of the Legionary Fortress in Viminacium. Archaeology and Science 17, 15–40.

RIC VII = Bruun P. M., 1966. The Roman Imperial Coinage, Vol. VII, Constantine and Licinius A.D. 313–337, Spink & Son Ltd, London.

RIC VIII = Kent J. P. C., 1981. The Roman Imperial Coinage, Vol. VIII, The Family of Constantine I A.D. 337–364, Spink & Son Ltd, London.

RPC = Roman Provincial Coinage online – http://rpc.ashmus.ox.ac.uk/coins

Redžić, S., Golubović, S., Vojvoda, M., 2022. Viminacium – Lokalitet Kod Koraba, istočna nekropola, Arheološki institut, Beograd.

Stevens, S., T., 1991. Charon's Obol and Other Coins in Ancient Funerary Practice. Phoenix 45.3, 215–229.

Vojvoda, M., 2018. Perforated Coins from Graves at the Viminacium Necropolis of Pećine. Starinar LXVIII, 65–87.

Vojvoda, M., Anđelković Grašar, J., 2022. Viminacium – History and Research, in: Vojvoda M., Danković I., Milovanović B. (eds.), VIVERE IN VRBE VIMINACIVM, Vol. I. Institute of Archaeology, Belgrade, 9–19.

Vojvoda, M., Golubović, S., Mikić, I., 2021. Mors immatura. Novac i apotropejsko-profilaktički elementi u pogrebnim ritualima – južna nekropola Viminacijuma / Coinage and Apotropaic-prophylactic Elements in Funerary Rituals – Southern Viminacium Cemetery, Institute of Archaeology, Belgrade.

Vojvoda, M., Mrđić, N., 2015. Nalazi novca sa viminacijumske nekropole Više grobalja i njihova

uloga u pogrebnom ritualu / Coin Finds from the Viminacium Necropolis of Više Grobalja and Their Role in Funerary Ritual, Institute of Archaeology, Belgrade.

Vojvoda, M., Mrđić, N., 2017. Nalazi novca sa viminacijumske nekropole Pećine i njihova uloga u pogrebnom ritualu / Coin Finds from the Viminacium Necropolis of Pećine and Their Role in Funerary Ritual, Institute of Archaeology, Belgrade.

# Средновековна колективна монетна находка от XII в. от с. Златна ливада, община Чирпан

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# A Hoard of Medieval Coins from the 12th-century Zlatna Livada Village in the Chirpan Municipality

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**Abstract:** A collective find of billon coins had been found at the village of Zlatna Livada in the Chirpan Municipality and in close proximity to the local monastery, which is the oldest in the Balkans. The coin find contains 919 billons characterised as follows: Manuel I Comnenus (779 coins), Andronicus I Comnenus (117 coins), and Isaac II Angelus (22 coins).
Three other hoards of the same composition were discovered close to Stara Zagora. They were found in the western outskirts of Stara Zagora and in the nearby villages of Kaloyanovetz and Preslaven and contained 699, 884, and 7.5 kg of billions, respectively.
The places where the four hoards were deposited could be related to the following historical events. After plundering Philippopolis in 1189, a part of the crusaders of the Third Crusade took the way to "the very rich city of Veroi (Beroe)." Their route passed through the Zlatna Livada region, causing the local population to hide their coins. The deposition of the last three coin hoards may have been a consequence of the crusaders' plundering of Veroi or the defeat of Isaac II Angelus by Ivan I Asen's troops at the Tryavna mountain pass in 1190. Following his defeatp Isaac II Angelus retreated via the old Roman road from Discoduratere through Kran and Beroe to the south.

**Keywords:** Coin hoards, 12th century, Third Crusade.

Находка от 919 билонови монети от XII в. е открита в района на манастира „Свети Атанасий" при с. Златна ливада, община Чирпан. Откриването и става при използване на металотърсач.[1] В находката преобладават монетите на Мануил I Комнин – 779 бр. Сечените при император Андроник I Комнин са 117 екземпляра, а от Исак II Ангел – 23 екземпляра, всички с монетарница Константинопол.

Монетите на Мануил I Комнин са само от III и IV сечене, монетарница Константинопол. От III сечене от двете фази са 310 монети, от IV сечене от двете фази и съответните варианти са 469 екземпляра.

**Мануил I Комнин (1143–1180 г.)**

**III сечене (Йорданов 1984, 33)**

Ав.: M-P–ΘY. Богородица седи на трон с ниско облегало, държи пред гърдите си медальон с лика на младенеца Христос.

Рев.: MANOYHΛ ΔΕΣΠΟΤΕΣ. Императорът прав, подпира се върху лабарум с дълга дръжка с дясната ръка, в лявата държи кълбо с кръст.

I фаза (**Фиг. 1**)

Кръстът над кълбото е двоен патриаршески.

**Fig. 1.** Монета, Мануил I Комнин, Константинопол, III сечене I фаза.

II фаза (**Фиг. 2**)

Кръстът над кълбото е единичен.

**Fig. 2.** Монета, Мануил I Комнин, Константинопол, III сечене II фаза.

**IV-то сечене (Йорданов 1984, 33–34)**

Ав.: IC-XC. Христос седи на трон с ниско облегало. С дясната ръка благославя, в лявата държи евангелие.

Рев.: Императорът прав, в дясната ръка държи лабарум с къса дръжка, в лявата кълбо с кръст. Вляво от него е Богородица, коронясваща императора.

[1] Монетите са открити от иманяр с металотърсач. Не са регистрирани в законовия срок и са иззети от полицията. След приключване на делото и след извършване на комплексна експертиза, монетите са предадени и заведени във фонд „Нумизматика" на Регионален исторически музей, Стара Загора.

I фаза (**Фиг. 3**)

Квадратни бисери в лороса и яката.

**Fig. 3.** Монета, Мануил I Комнин, Константинопол, IV сечене I фаза.

II фаза (**Обр. 4**)

Липсват квадратни бисери в лороса и яката.

**Fig. 4.** Монета, Мануил I Комнин, Константинопол, IV сечене II фаза.

**Вариант В**

Яката е украсена с три перлени бисера, лоросът между яката и поясът е с един бисер, коланът е с 5 бисера.

**Вариант Г**

Яката е украсена с три перлени бисера, лоросът между яката и поясът е с два или три бисера. Един от бисерите в украсата е поставен в кръг.

**Андроник I Комнин (1182-1185 г.) – 117 екз.**

**(Йорданов 1984, 39)**

Ав.: M-P–ΘY. Богородица с нимб, права, държи медальон с лика на Младенеца.

Рев.: ΛNΔPONIKOΣ ΔΕΣΠΟΤΗΣ. Императорът прав, държи лабарум в дясната ръка с къса дръжка и в лявата кълбо с кръст. Вляво от него Христос, който го коронясва с дясната ръка, а в лявата държи евангелие.

Вариантите са в разликата в броя на бисерите на яката на императора 1, 2 или 3.

Най-малко само 23 броя са монетите сечени при Исак II Ангел.

**Fig. 5.** Монета, Андроник I Комнин, Константинопол.

**Исак II Ангел (1185–1195 г.)**

Ав.: Μ-Ρ–ΘΥ. Богородица с нимб, мантия и мафорий, седи на трон с ниско облегало. Държи пред себе си медальон с лика на Младенеца

Рев.: ΙΣΑΑΚΙΟΣ ΔΕΣΠΟΤΗΣ. Императорът прав със стема, дивитисион и лорос. В дясната ръка държи жезъл с къса дръжка, в лявата акакия. Горе вдясно зад сегмент от небе се вижда божията десница, коронясваща императора.

**Fig. 6.** Монета, Исак II Ангел, Константинопол.

Най-близки по състав до съкровището от с. Златна ливада от територията на Старозагорско са три съкровища.

Първото е откритото в местността Голямата могила при с. Калояновец (Герасимов 1963, 259; Hendy 1969, 350–351). Състои се от 884 билонови монети от императорите Мануил I Комнин, Андроник I Комнин и Исак II Ангел.

Второто съкровище е известно в литературата, като Стара Загора II (Йорданов 1984, 209). Открито е през 1974 г. при изкопни дейности за новостроящата се партийна школа в западните покрайнини на Стара Загора. Съдържа 699 скифати от императорите Мануил I Комнин, Андроник I Комнин, Исак II Ангел и 1 монета на Теодор Мангафа от Филаделфия.

Третото е известно само по литература. Съобщението е за 7.5 кг монети с произход с. Преславен. Монетите са сечени при императорите Алексий I Комнин, Андроник II Комнин, Йоан II Комнин, Исак II Ангел .

И при трите съкровища най-късните монети са на Исак II Ангел. Възможно е съкровището от с. Златна ливада да кореспондира и с това от землището на с. Съединение, Чирпанско, което е единственото открито досега на територията на Старозагорско, съдържащо и златни монети. Състои се от хиперперонови и билонови монети. Първоначално е съобщено от Герасимов (Герасимов 1957, 21; Йорданов 1984, 212; Hendy 1969, 386–387) без да е уточнен състава му. В музея в Стара Загора са постъпили 6 хиперперона на Алексий I Комнин, 2 хиперперона на Йоан II Комнин и 26 билонови монети на Йоан II Комнин. Възможно е да е имало и по-късни монети. Находката е публикувана от Минкова (Минкова 2009, 448).

Единични златни монети на императори от династията на Комнините на територията на Старозагорско са открити при Старозагорските минерални бани – 2 екз. на Андроник I Комнин, при с. Сърнево - 1 екз. на Алексий I Комнин, при кариерата на р. Тунджа - 1 екз. на Йоан II Комнин.

Повечето известни съкровища с монети на Комнините от Старозагорско включват и по-късни монети, най-вече на Алексий III Ангел (съкровището Стара Загора III Герасимов 1964, 244; Йорданов 1984, 209–210) и често и на Теодор I Ласкарис и латински и български имитации. Находката от с. Братя Кунчеви (Черково; Герасимов 1964, 326; Йорданов 1984, 224–225) включва монети на Исак II Ангел, Алексий III Ангел и български имитации. Подобна по състав е и тази от Ягода (Горно Паничерево; Герасимов 1964, 241; Йорданов 1984, 226; Hendy 1969, 400), съдържаща монети на Алексий III Ангел и български имитации. По широкообхватни хронологически са находките от Мъглиж (Hendy 1969, 367–368; Йорданов 1984, 191). Съдържат и монети на Комнините. Първата съдържа 1196 екземпляра и завършва с Алексий III Ангел и български и латински имитации, а втората от Мъглиж (Hendy 1969, 369–370; Йорданов 1984, 191–192) е с 6923 монети, като освен тези има латински имитации и на Теодор I Ласкарис, подобно на съкровището Стара Загора

IV, съдържащо общо 1944 екземпляра и находката от с. Тулово с 834 монети. (Hendy 1969, 390; Йорданов 1984, 217–218).

Преглеждайки известните монетни съкровища от XII първата половина на XIII век от Старозагорско, ясно се очертават две групи монети. Едната с монети завършващи на края на XII век и втората стигаща до първата половина на XIII век.

Монетните съкровища имат обяснение предвид историческите факти.

От византийските хрисовули дадени през 1092 г. и 1148 г. на венецианците става ясно, че са им били известни по-големите тракийски и македонски градове през 1198 г.

Алексий III Ангел издава хрисовул на Венеция с който спокойно да търгуват с редица теми между които и Берое. Боруй е бил посещаван и от търговци от Дубровник. През проучвания период XII началото на XIII век Тракия е богат земеделски район където се отглеждат хубави зърнени храни и грозде. Жофроа Вилардуен и др. са оставили описания за плодородието на Тракия и за изобилието на селскостопански продукти. През есента на 1189 г. след като превземат Филипопол, част от рицарите на Третия кръстоносен поход се отправят да превземат "твърде богатия град Верои (Берое)". Четири дни те го разграбват и плячкосват и натоварени с плячка се завръщат във Филипопол. Намират в изобилие жито, ечемик, брашно, вино, волове, овце и разнообразни дрехи (ЛИБИ, III, 267). Градът е повторно разграбен от рицарите в началото на януари 1190 г., когато е и запален за отмъщение. За трети и последен път градът е атакуван от кръстоносците в началото на XIII век. През 1208 г. близо до Берое е битката между войските на българския цар Борил и идващата от Адрианопол латинска армия на Анри Фландърски. Кръстоносците губят битката и безуспешно се отправят към Филипопол. Това е последното нападение на Берое от кръстоносците.

Находката от с. Златна ливада може да се свърже с някое от оттеглянията на кръстоносците от Берое. Най-вероятно тя е укрита при придвижването от Берое към Филипопол по време на Третия кръстоносен поход, за което има сведения, че те са минали през крепостта Близмос (при днешното село Златна ливада), Старозагорско, като са всели паника всред населението.

Със заплахата от нападенията на кръстоносците се свързват и подобните на коментираната находка от с. Златна ливада, тези от селата Калояновец, Преславен и Стара Загора II. Най-късните монети в тях са синхронни и с битката в Тревненския проход през пролетта на 1190 г. при която Исак II Ангел е разбит и бяга от сражението по стария римски път от Дискодуратере към Берое.

Още две групи колективни монетни находки се очертават в периода между нападенията на кръстоносците и завладяването на Берое при Теодор I Ласкарис през 1255 г. Едната група са съкровищата от селата Братя Кунчеви (Йорданов 1984, 224), Ягода (Йорданов 1984, 226), Мъглиж I (Йорданов 1984, 191), при които най-късните монети са на Алексий III Ангел и латински и български имитации. Втората група завършват с монети на никейския владетел Теодор I Ласкарис. Това са находките от Мъглиж II (Йорданов 1984, 191) с 6943 монети, Тулово (Йорданов 1984, 217), Стара Загора IV (Йорданов 1984, 210), открита при строителството на Халите и известната само по литература Стара Загора V (Йорданов 1984, 211). Тези находки са със сигурност укрити след завладяването на Боруй от Теодор I Ласкарис.

**Библиография**

Герасимов Т. 1963, (26) ИАИ, Съкровища от монети намерени в България през 1960-1961 г., 257–266.

Герасимов Т. 1964, (27) ИАИ, Монетни съкровища намерени в България през 1962 и1963 г., 237–244.

Йорданов, Ив., 1984. Монети и монетно обращение в средновековна България.

Минкова М. 2009, Находка от иперперони и билони на Алексий I Комнин и Йоан II Комнин от с. Съединение, Чирпанско. – В: Пътуванията в Средновековна България, В. Търново, 2009, с. 448–464.

Hendy, M. F., 1969 Coinage and money in the Byzantyne empire 1081-1261, 350-351.

ЛИБИ = Латински извори за българската история, Historia de expeditioni Frederici imperatori, III, София, 245–291.

# Monetary Circulation in the 5th Century: Evidence from Slovenia

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**Abstract:** The numerous coins found in the territory of present-day Slovenia show that the monetary circulation in the first decades of the 5th century took place without any major disturbances, as there was a large quantity of coins of varied denominations in circulation. However, coin circulation sharply declined in the second half of the 5th century, possibly indicating a shift towards a barter system. Gold coins, likely linked to military or provincial administration, predominated. Our study investigates the absence of bronze coins in Slovenian Late Antique sites during the second half of the 5th and early 6th centuries. Two selected sites were examined; one lacking reliable stratigraphic evidence and the other spanning from the late 4th to early 7th centuries. At Tonovcov Grad, stratigraphic evidence indicates the continued use of 4th-century coins into the 5th century. For sites of unreliable stratigraphic data, comparative numerical analyses suggest the use of 4th-century coins into the 5th century, providing that a site has very high shares of coins from the second half of the 4th century and unidentifiable coins.

**Keywords:** Late Antiquity, Roman Empire, Late Roman Coins, Ostrogothic Coins, Slovenia.

BulgNJ

Peter Kos was the first to study the monetary circulation in the 5th century as observed in the area of present-day Slovenia, publishing his findings in *'The Monetary Circulation in the South-eastern Alpine Region ca. 300 BC – AD 1000'* (Kos 1986). He found that the inflow of Roman bronze currency remained uninterrupted until the second or third decade of the 5th century. He also noted that the coins from this period were numerically well-represented, especially in Emona (today's Ljubljana) and Celeia (today's Celje), and that there were rare coins of the Byzantine emperor Anastasius I from the end of the 5th century (Kos 1986, 225–226; Kos 1988, 93-1; 155/47-638; 221-1; 223/1-2; and 434/25-1208) and slightly more numerous coins from the 6th century (Kos 1986, 218–232). A few years later, the same author presented similar findings in '*The Numismatic Evidence for the Period from the 5th to the 10th Centuries in the Area of Modern Slovenia*' (Kos 2000). In the article before you, we will begin by briefly presenting the monetary circulation in the 4th century as an introduction to the changes that occurred in the 5th century, but also as a starting point for discussing the possibility of continued use of the 4th-century coins.

The monetary circulation in the territory of present-day Slovenia can be assessed by examining three site complexes – namely the Roman towns of Emona, Celeia, Poetovio (today's Ptuj), and Neviodunum (today's Drnovo), but also other sites. These include several minor settlements.

There are also the army posts of the Claustra Alpium Iuliarum barrier system that, from the mid-3rd century onwards, protected the entry points into Italy along the line between Rijeka in the south and Villach in the north. Finally, we have several intensely inhabited hilltop sites, mainly those located in central and eastern Slovenia.

## 1. Monetary circulation in the 4th century

In the territory of present-day Slovenia, we can trace an uninterrupted monetary circulation from the time of the Roman Republic to the opening decades of the 5th century. A large number of coins of all denominations were in circulation during this span, and the number of documented coins is inversely proportional to their value, as bronze coins with the smallest denominations are best represented (Kos 2000, 110). For the 4th century, the bronze coinage played the most important role in the everyday lives of the population, particularly in the first half of the 4th century. Gold coins were relatively rarely lost in the 4th century, and most have been unearthed in hoard contexts, which suggests they were a popular means of storing wealth among the richest social strata (Kos 2000, 110).

Chart 1 shows the monetary circulation in the first half of the 4th century according to the periods of coinage, beginning with Diocletian's reforms in 294 and terminating with the end of the *Fel Temp Reparatio* type of coinage. Two distinct peaks are visible, the first between 330 and 340 and the second between 348 and 361. In the first case, the *Gloria Exercitvs* type dominates, while in the second, it is the *Fel Temp Reparatio* type.

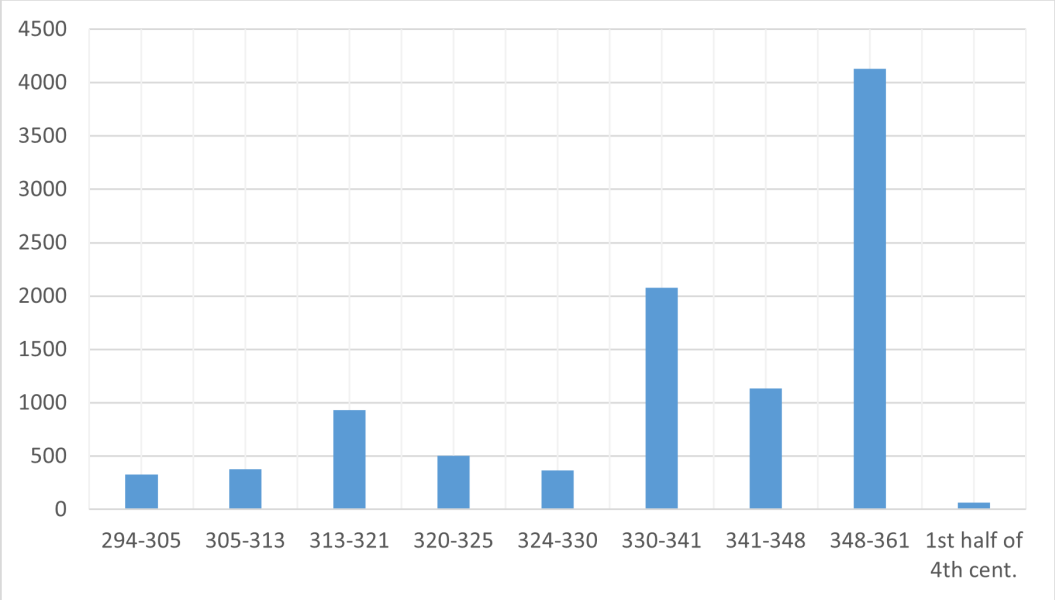


**Chart 1.** Monetary circulation in the first half of the 4th century according to periods of coinage, present-day Slovenia.

Chart 2 shows the monetary circulation in the second half of the 4th century, from 361 to 408. There is an obvious peak in 364–378 when the *Gloria Romanorum* and *Securitas Reipublicae* types dominate. The considerable portion of unidentifiable coins is not surprising, as they are small and mostly poorly preserved, probably in circulation for a long time. For the entirety of the 4th century, we can ascertain that bronze coins predominated, gold and silver ones were rare, and only few gold coins date to the second half of the 4th century, predominantly *solidi*.

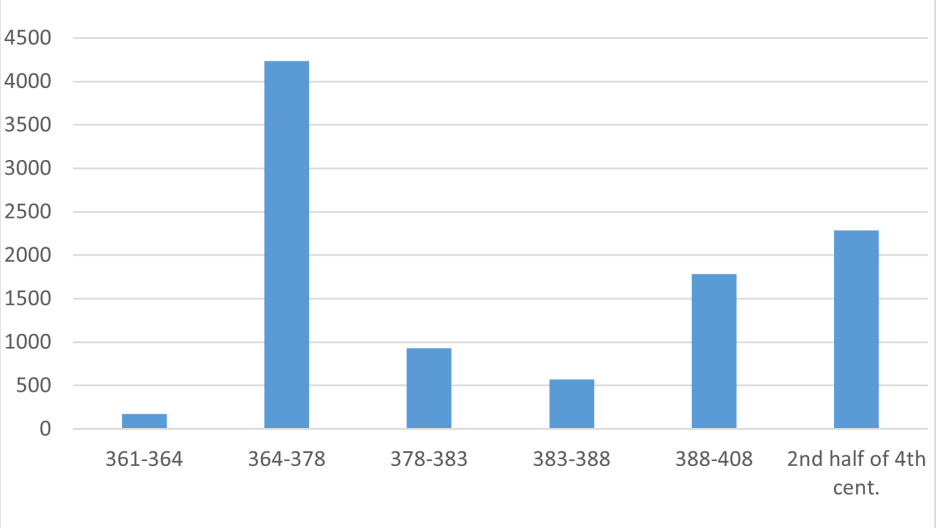


**Chart 2.** Monetary circulation in the second half of the 4th century according to periods of coinage, present-day Slovenia.

## 2. Monetary circulation in the first half of the 5th century

### 2.1 Towns and minor lowland settlements

As we have seen in the previous section, the currency inflow in present-day Slovenia was constant during the 4th century. The circulation did not include contemporary imitations and halved coins of higher denominations, which suggests there was no shortage of currency in this area, not even of low values (Kos 1994, 446). This situation changed in the 5th century. The regular influx of coinage into circulation seems to have concluded with the bronze *Gloria Romanorum* 11 type coins of Honorius, minted between 408 and 423, primarily in the mints of Roma, Aquileia, and Siscia (Kos 2000, 110). The end of a regular influx does not, however, mean that monetary circulation ended as well.

A large number of coins of this type was documented, most in Emona (Kos 1988, 155/4, 6, 7, 8, 9, 10, 12, 17, 29, 32, 37, 40; Kos-Šemrov 1995, 83/2, 3, 15, 19; Šemrov 1998, 85/2, 11, 13; Šemrov 2004, 62/6, 7, 9, 10, 14, 15; Šemrov 2010, 79/2, 7, 11, 14, 16), more than ten in Celeia (Kos 1988, 340/1; 340/3; Šemrov 2010, 148), and single examples at several other sites – predominantly in western Slovenia. Surprisingly, only few are known from the largest Roman city in Slovenia, Poetovio (Kos 1988, 434/14; Kos-Šemrov 1995, 200; Šemrov 1998, 197).

As already mentioned, the largest proportion of the *Gloria Romanorum* 11 type is from Emona and Celeia, which may speak of a small community living in either town, at least to the middle of the 5th century. In Emona, a complex for the town's Early Christian community was constructed in the 4th century at the west town walls and close to the forum, and added a baptistery in the early 5th century (Knific 1991, 13; Županek 2021, 30–34; Ciglenečki 2023, 32). In association with it, the recent investigations of the presumed Early Christian part of Emona's vast northern cemetery unearthed 350 graves that included a large number of sarcophagi and also sacred buildings (Županek 2021, 34). In Celeia, the remains of an Early Christian basilica came to light in the easternmost part of the town, with the mosaic decoration suggesting a construction date of the first half of the 5th century, while the remains of a baptistery from the early 5th century were later found further west, at the medieval town wall (Knific 1991, 12; Bausovac, Krajšek 2020, 53–55; Ciglenečki 2023, 33). Furthermore, written sources mention the bishops of Emona, Celeia, and Poetovio from the late 4th to the late 6th centuries (Bratož 1981).[1] The lack of the *Gloria Romanorum* 11 type of coins in Poetovio is in contrast with the recovered remains of one of the earliest churches in the region, from the first half of the 5th century, with decorated marble elements and

[1] Tina Milavec writes that literary evidence contradicts archaeological sources that do not indicate an active life in the urban centres (Milavec 2020, 159–160).

mosaics with intricate geometric designs, as well as a cemetery with graves reaching to the middle of the 5th century (Ciglenečki 2023, 34). This lack could simply be due to the state of research, the fact that these coins are very small and may have been overlooked during investigations, or possibly the fact that the Roman town sprawled on both riverbanks of the Drava, prone to shifting its course and taking with it whole parts of the city (Horvat 2024, 430–431).

The fourth Roman town in the territory of present-day Slovenia, Neviodunum, revealed no coins from the first half of the 5th century, which is consistent with the archaeological evidence that also shows an absence of 5th-century remains (Ciglenečki 2023, 35).

The sites from western Slovenia include a Roman farmstead at Školarice near Spodnje Škofije in Slovenian Istra. This villa rustica with residential and production areas revealed *Gloria Romanorum* 11 type coins (Šemrov 2010, 42) and other objects that show life in the villa until the mid-5th century when a fire destroyed the complex. This corresponds with the general observations on life in most Roman villas of the Trieste area and Istra continuing uninterruptedly to the 4th and 5th centuries or even beyond (Žerjal, Novšak 2020, 10, 271). Another coastal site is the small settlement with a harbour at Fizine near Portorož (Gaspari et al. 2007, 205–206), which reached its apogee in the 4th and first half of the 5th centuries, as the *Gloria Romanorum* 11 type coins confirm (Šemrov 2004, 24).

Small finds such as the coins of Honorius show that life continued, albeit modestly, into the opening decades of the 5th century in minor settlements such as Praetorium Latobicorum (cf. Bavec 2020, 372) and Gonjače (Kos 1988, 30; cf. Ciglenečki 1997, 193).

The *Gloria Romanorum* 11 coins of Honorius are also known from two sites, namely Godič near Kamnik (Šemrov 1998, 83) and Moste (Šemrov 1998, 69; Šemrov 2004, 49), that are of a specific nature. They are both Late Roman sanctuaries in rock shelters located in remote areas. The finds from these sanctuaries range from abundant coins, fragments of tableware and oil lamps to numerous animal bones and fragments of silver votive plaques – all of which point to rituals being performed in honour of a divinity, as yet unidentified.

**2.2 The Claustra Alpium Iuliarum barrier system and other army posts**

Coin finds show that life also continued at army posts; these are, in fact, the best researched. Within the Claustra Alpium Iuliarum defensive system, coins indicate that monetary circulation was interrupted throughout most of the system as early as the end of the 4th century; at the Ad Pirum and Tarsatica forts, the regular influx of coinage ceased in 402/403 (Kos 2012, 282–284). Two *Gloria Romanorum* 11 coins of Honorius were found at Ad Pirum (Kos-Šemrov 1995, 15) and Martinj Hrib (Šemrov 1998, 100), which suggest the forts occasionally hosted small garrisons. Among the last to survive was Castra, where habitation was documented up to the initial decades of the 5th century (Kos 1988, 13; Kos-Šemrov 1995, 12).

For the purposes of controlling the area and providing safety, the Romans also used smaller army posts or refuges. One of these may be at Predjama near Postojna. We lack precise data on the site, though its strategic position near the main road connecting Aquileia with Sirmium and its multitude of small finds of a military character could indicate an army post (Ciglenečki 1997, 193). From the considerable number of the *Gloria Romanorum* 11 type bronze coins of Honorius and even one gold coin (Kos 1988, 92), we can infer that the post was also active in the first half of the 5th century.

**2.3 Upland settlements/posts**

The most prominent types of settlements in Late Antiquity include fortified hilltop posts, which were most frequently located in remote and poorly accessible upland areas (Ciglenečki 1999, 290–295). The chronology of the hilltop settlements clearly shows several waves of occupation, but also that most settlements were not inhabited continually from the 4th to the 6th centuries. The current research has detected rare hilltop settlements in western Slovenia, with the *Gloria Romanorum* 11 type coins of Honorius found at Gradič above Kobarid (Šemrov 1998, 4/1; Šemrov 2004, 3), Tonovcov Grad near Kobarid (Kos-Šemrov 1995, 7; Šemrov 1998, 5), Puštal above Trnje, (Šemrov 1998, 76; Šemrov 2004, 53/1) and Polhograjska Gora above Polhov Gradec (Kos 1988,

179). In central Slovenia, these coins came to light at Limberk near Mala Račna (Šemrov 1998, 80, 15; Šemrov 2004, 55; Šemrov 2010, 71), Sv. Lambert near Pristava nad Stično (Šemrov 1998, 106; Šemrov 2010, 94) and Korinjski Hrib. The eastern part of Slovenia contained the aforementioned coins in Gradec above Mihovo (Šemrov 2004, 94; Šemrov 2010, 115), Svete Gore above Bistrica ob Sotli (Šemrov 2004, 109), Šentviška Gora above Čatež ob Savi (Šemrov 2004, 110), and Dunaj (Šemrov 1998, 145).

Having said that, we should note that the presence of the *Gloria Romanorum* 11 type coins on these hilltop settlements does not necessarily signify they were only used at the time of their production, i.e. the opening decades of the 5th century, but possibly also later; the latter possibility will be discussed in the final section.

## 3. Monetary circulation in the second half of the 5th century

The situation changed drastically in the second half of the 5th century. The incursions of groups of barbarian peoples and a ruthless taxation policy, which began in the last quarter of the 4th and intensified in the opening decades of the 5th century, led to mass emigration, violent deaths, and war activities in West Illyricum, causing a great loss of population and desolation (Bratož 2007, 248–267). Coin finds from this period are extremely rare, and gold coins predominate. Three coins were found in Poetovio (Kos 1988, 434/7; 434/20; Kos-Šemrov 1995, 200), but none were in Emona or Celeia. Byzantine historian Priscus described the mission to the court of Attila, led by *comes* Romulus, that began in Poetovio, suggesting that a small community lived in Poetovio in the mid-5th century (Šašel Kos 1994).

There is a widely held opinion that the population living in present-day Slovenia during Late Antiquity began moving to safer areas; these could have been fortified outposts, most often in remote and hard-to-reach places. They could also have remained in the lowland settlements that were protected both naturally and with mighty fortification walls. In the numerous known upland fortifications, coins from the second half of the 5th century only occurred at Tonovcov Grad near Kobarid (Šemrov 2004, 4), Sv. Lambert near Pristava nad Stično (Šemrov 2004, 79), Gradec near Velika Strmica (Kos 1988, 248), Svete Gore above Bistrica ob Sotli (Šemrov 2004, 109), Gradec near Prapretno (Šemrov 2004, 141), and Tinje above Loka pri Žusmu (Kos 1988, 383). *Tremisses* of the emperor Zeno, at least three of them minted in Mediolanum under the rule of Odovacar, were found at five upland fortifications.

The objects of a military nature at Tonovcov Grad and Svete Gore above Bistrica ob Sotli suggest these sites complemented the network of military posts and, in addition to their strategic importance, also carried out signalling tasks. A number of military finds and a coin (a *tremissis* of Zeno) indicate a military character of the settlement on Ulaka as well (Šemrov 1998, 42), which some authors see as forming part of the Italian defence system (cf. Gaspari 2020, 168).

In fact, several authors associate the gold coins from the 5th century with the army or military units, composed primarily of hired barbarian soldiers, *foederati*. The gold coins could also represent military wages or *donativa* for the soldiers/officers.

Three coins were also found in the lowland settlements at Hrastje near Polje (Kos 1988, 180), on the eastern outskirts of Ljubljana, in Kranj (Kos 1988, 113) and in Črnomelj (Miškec 2021). The last two have excellent natural defences, located on promontories above river confluences and are additionally protected by strong fortification walls.

**Table 1: Coins from the second half of the 5th century found in the territory of present-day Slovenia (cf. Miškec 2021, 52).**

| Site | Valentinian III 425–455 | Anthemius 467–472 | Iulius Nepos 474–475 | Leo I 457–474 | Zeno (second reign) |
|---|---|---|---|---|---|
| Kobarid-Tonovcov grad | | | | | Odovacar, Tre; Šemrov 2004, 4 |
| Ulaka (Stari trg pri Ložu) | | | | | Tre; Šemrov 1998, 42 |

| Site | Valentinian III 425–455 | Anthemius 467–472 | Iulius Nepos 474–475 | Leo I 457–474 | Zeno (second reign) |
|---|---|---|---|---|---|
| Hrastje, near Polje (Ljubljana) | | | | | Tre; Kos 1988, 180 |
| Sv. Lambert (Pristava nad Stično) | | | | AE 4; Šemrov 2004, 79 | |
| Šentjurij, near Grosuplje | | | | Sol; Šemrov 1998, 104 | |
| Gradec, near Velika Strmica | | | | | Tre; Kos 1988, 248 |
| Črnomelj | | Tre (Miškec 2021) | | | |
| Svete Gore (Bistrica ob Sotli) | | AE 4; Šemrov 2004, 109 | | AE 4; Šemrov 2004, 109 | |
| Gradec, near Prapretno | | | | | Odovacar, Tre; Šemrov 2004, 141 |
| Tinje, above Loka pri Žusmu | | | | | Odovacar, Tre; Kos 1988, 383 |
| Hajdina-Ptuj | | Sol; Kos 1988, 434/7 | | | |
| Ptuj | Sem; Kos 1988, 434/20 | | | | |
| Vičava-Ptuj | | | | AE 4; Kos-Šemrov 1995, 200 | |
| Styria (Štajerska) | | | | Sol; Kos 1988, 467/1 | |

## 4. The continued use of the 4th-century coins

This section tackles the question of how to explain the absence of bronze coins from the second half of the 5th and the early 6th centuries at Slovenian Late Antique sites.

It is well known that bronze coins from the second half of the 4th century were rarely recalled and recycled and hence remained in circulation for many years after being struck. There are several studies that deal with this phenomenon in different parts of the empire. We should, however, note important differences between the sites in the eastern and those in the western half of the empire. These differences stem from the different circumstances that shaped different monetary policies. The incursions of barbarian peoples, which conquered vast territories in the west, had an impact on the diminished extent of the Roman imperial coinage. Most of the mints were closed, and imperial minting was concentrated in Rome and Ravenna, although the two cities could not meet the actual demand for coins. In contrast, the Eastern Empire continued to strike coins in almost all the mints, though to a lesser extent, at least until the reign of the emperor Zeno.

The demand for low-value bronze coins increased in the second half of the 5th century. Studies of sites in the eastern Mediterranean and the Balkans – particularly Beirut in Lebanon (Butcher 2003, 27–31, 97–99), Carthage in Tunisia (Reece-Hurst 1994), Abu Mina in Egypt (Noeske 2000), several sites in Israel (Bijovsky 2012), and sites at the Lower Danube frontier in Bulgaria and Romania (Guest 2019) – have shown that different solutions were adopted to tackle the problem of the low-value bronze coin shortage in the second half of the 5th century. They included continued use of coins, primarily from the 4th century, alongside those minted in the 5th century,[2] the produc-

[2] Cf. the study in which P. Guest (2019) analysed stray coin finds from nine cities in the central and eastern Mediterranean and five sites from the Lower Danube frontier in Bulgaria and Romania. One of the

tion of imitations, and the use of blank flans as regular currency (Bijovsky 2012, 75). Moreover, almost every excavated 5th- or 6th-century site yielded coins of the 4th century regardless of whether it was inhabited during the 4th century.

Our study, therefore, examined the archaeological sites with a large share of coins from the second half of the 4th and partly the first half of the 5th centuries, which also revealed coins from the 5th and 6th centuries. We selected two sites; one offers no reliable stratigraphic evidence, and the other shows two Late Antique phases spanning from the second half of the 4th to the early 7th centuries.

The first site is the military fort on Korinjski Hrib. It revealed no reliable stratigraphic data for the Late Antique period, as the habitation layers had long been destroyed. The remains of military equipment, pottery, and coin finds have proven a strong military presence in the Valentinian period, when the fort began to be operational on a permanent basis (Ciglenečki et al. 2020, 337). The most intensive habitation traces date from the late 5th and the second half of the 6th centuries and comprise masonry architecture, pottery, metal, and glass finds (Ciglenečki et al. 2020, 338–339), as well as coins: two silver coins of the Byzantine emperor Justinian I (Kos, Šemrov 1995, 131; Šemrov 2004, 104), and one silver and one bronze coin of the Ostrogothic ruler Athalaric (Šemrov 1998, 130; Kos 2020, 128, 135). A detailed analysis of the body of numismatic evidence from the site revealed four Celtic, 180 Roman, and the above-mentioned Byzantine and Ostrogothic coins.

The coins from the first half of the 4th century amount to 13% of all Roman coins at the site, and the share of coins from the second half of the 4th century is extremely high and amounts to 58% – most of them of the *Securitas Reipublicae* type. Of all identifiable coins, 2.77% belong to the *Gloria Romanorum* 11 type.

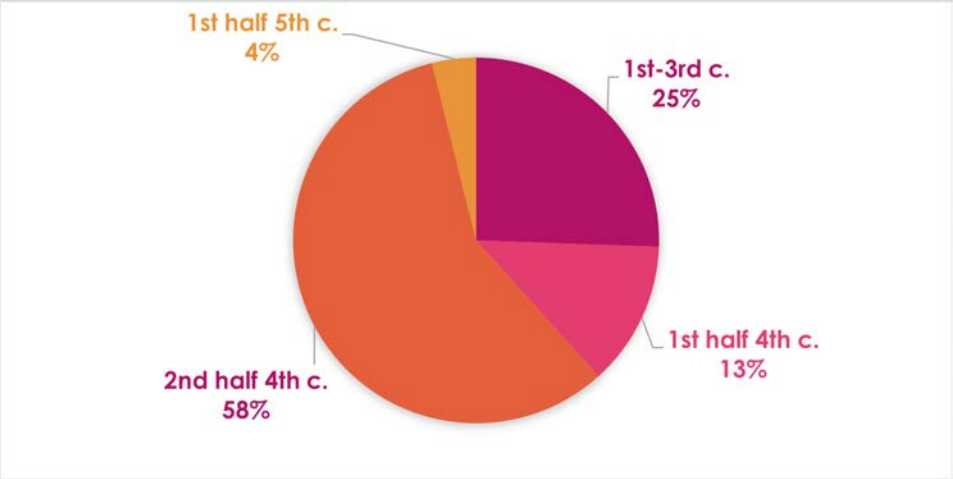


**Chart 3.** Shares of Roman coins from Korinjski Hrib.

The second site is Tonovcov Grad, also a military fort, where 156 Roman, one Byzantine silver coin of Justinian I, as well as four silver and one bronze coin of Ostrogothic rulers were found (Kos 2011, 229, 237). The site revealed several phases of occupation, though the first reliable architectural remains only began in the Late Roman period (first half of the 4th and early 5th centuries). Next was the main phase of habitation at the site, to which most of the building remains can be attributed; pottery and other small finds date this phase from the late 5th to the early 7th centuries (Modrijan, Milavec 2011, 11–17). This is also the phase that yielded most of the coins (Kos 2011, 221–229). The coins from Tonovcov Grad have a broad span, beginning with three

findings, relevant for our research, is that people dealt with the absence of new low-value bronze coinage by continuing to use 4th-century coins in the 5th century and 4th/5th-century coins into the 6th century. Thus, coins well over a century old remained in circulation and were used in marketplaces and elsewhere.

examples from the 1st century AD and terminating in the coins from the 5th and early 6th centuries: two quarter-*siliquae* (Šemrov 1998, 5–138 and 139) and a bronze coin valued at 10 *nummi* in the name of the Ostrogothic ruler Theoderic (Šemrov 1998, 5–141). The bulk of the coins date to the late 4th and opening decades of the 5th centuries. Several coins from the 5th and 6th centuries, which are significant for the chronology of the site, are without original context data: a *tremissis* of Zeno from 480–491 (Šemrov 2004, 4-1) found in a mixed layer, a quarter-*siliqua* in the name of Theoderic from 500–518, (Šemrov 1998, 5-140) and a half-siliqua in the name of his successor Athalaric from 527–534 (Kos, Šemrov 1995, 7-6) – both found beyond the excavation area.

Coins from the first half of the 4th century are relatively scarce and represent 14% of all Roman coins. As much as 48% of all Roman coins were minted in the second half of the 4th century. The most common among these are the coins of Valens, which is to be expected, given that he ruled for a long time, and thus, his coins were minted for a longer period as well. The ratio of the two bronze types of this period (*Securitas Reipublicae* and *Gloria Romanorum*), however, differs from the values most commonly documented across the empire as the *Gloria Romanorum* 11 type prevails; almost 18% of all identifiable coins belong to this type, which is a very high percentage compared to other sites.

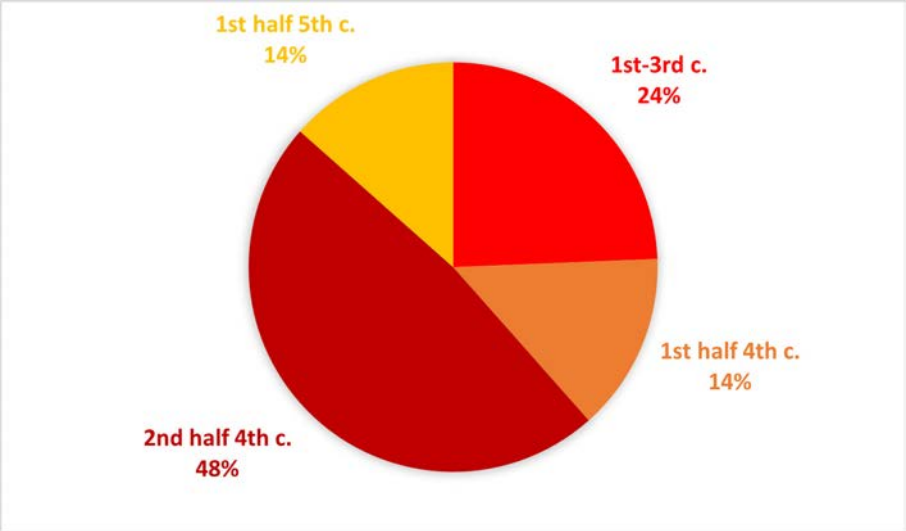


**Chart 4.** Shares of Roman coins from Tonovcov Grad.

The reliable archaeological evidence (stratigraphy) at Tonovcov Grad shows the coins used in the late 5th and 6th centuries included earlier coins, predominantly those from the second half of the 4th century. Can as much also be presumed for Korinjski Hrib? We have compared the coins from the two sites using a numerical analysis, which is suitable for comparisons between different sites or areas. The resulting chart shows the shares according to the length of the coinage period (percentage of coins in a period divided by the number of years of the coinage period). We used the formula proposed by Casey that represents the 'annual loss per 1000 coins'. The calculation is as follows: coins per reign/length of reign x 1,000/total for site (Casey 1988, 41). For coinage periods, we used Reece's division into 21 periods covering the time from the pre-Claudian period to 402 AD (Reece 1972, 271), as well as the two periods, 402–445 and 445–498, that Moorhead added for the 5th century (Moorhead 2007, 288).

A comparison of the coins from Korinjski Hrib and Tonovcov Grad shows that the increase in coins at both sites began in 260–275, and the next peak occurred in the second half of the 4th century, with Korinjski Hrib revealing a significantly higher share of coins from 364–378, whereas Tonovcov Grad shows an almost even distribution in 348–364 and 364–378. A greater difference is noticeable in 402–445 when Tonovcov Grad yielded greater numbers of coins. The distribution of coins according to periods is much more even at Tonovcov Grad than at Korinjski Hrib. We should note that the coins from both sites include a large number of unidentifiable examples;

they are poorly preserved and may have been in use for a very long time. As the two sites show similarities in monetary circulation, and given that the stratigraphic data for Tonovcov Grad confirm the coins from the second half of the 4th century were also used in the second half of the 5th century, we can conclude that coins from the 4th century may have been used in later times at Korinjski Hrib as well. Supporting this hypothesis is the observation that a large number of coins from 364–378 found at Korinjski Hrib may, actually, have only been used in the 5th century.

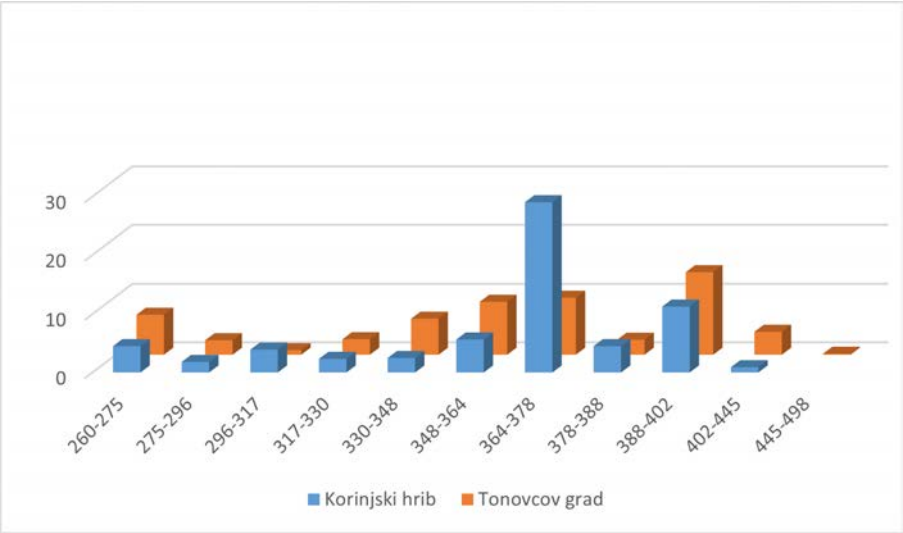


**Chart 5.** Comparison of the monetary circulation at Korinjski Hrib and Tonovcov Grad between AD 260 and 498.

## Conclusions

The results of the analysis of the monetary circulation in the 5th century, as visible in the territory of present-day Slovenia, can be summarised as follows:

1. The regular influx of coins into circulation ended with the bronze coins of the *Gloria Romanorum* 11 type of Honorius, minted between 408 and 423.

2. In the second half of the 5th century, coin finds are extremely rare and gold coins predominate.

3. The stratigraphic evidence for Tonovcov Grad shows that coins from the second half of the 4th century continued to be used in the 5th century.

4. For sites of unreliable stratigraphic data, comparative numerical analyses suggest the use of 4th-century coins into the 5th century, providing that a site has very high shares of coins from the second half of the 4th century and unidentifiable coins.

## Bibliography

Bausovac, M., Krajšek, J., 2020. Municipium Claudium Celeia. Celeia Antiqua, 2. Pokrajinski muzej Celje, Celje.

Bavec, U., 2020. Praetorium Latobicorum – Trebnje, in: Horvat, J., Lazar, I. and Gaspari, A. (eds.), Manjša rimska naselja na slovenskem prostoru = Minor Roman Settlements in Slovenia. Založba ZRC, Ljubljana, 363–385.

Bijovsky, G.I., 2012. Gold Coin and Small Change: Monetary Circulation in Fifth–Seventh Century Byzantine Palestine. (Polymnia: Numismatica Antica e Medievale. Studi, 2). EUT Edizioni Università di Trieste, Trieste.

Bratož, R., 1981. Kratek oris zgodovine krščanstva na Slovenskem v pozni antiki (Zusammenfassung: Kurzer Überblick über die Geschichte des Christentums in Slowenien in der Spätantike). Zgodovinski časopis 35/3, 205–221.

Bratož, R., 2007. Izseljevanje prebivalstva iz Zahodnega Ilirika v 5. in 6. stoletju. Vojni ujetniki in begunci v pozni antiki (Zusammenfassung: Die Auswanderung der Bevölkerung Westillyricums im 5. und 6. Jahrhundert), in: Šenk, T. (ed.), Arhivistika, zgodovina, pravo. Vilfanov spominski zbornik = Archivkunde, Geschichte, Recht. Gedenkschrift für Sergij Vilfan = Archives, History, Law. Vilfan's Memorial Volume. Zgodovinski arhiv, Ljubljana, 247–284.

Butcher, K., 2003. Small Change in Ancient Beirut. The Coin Finds from BEY 006 and BEY 045: Persian, Hellenistic, Roman, and Byzantine Periods. (Berytus 45-46). American University of Beirut, Beirut.

Casey, J., 1988. The Interpretation of Romano-British Site Finds, in: Casey, J. Reece, R. (eds.), Coins and the Archaeologist. Seaby, London, 39–56.

Ciglenečki, S., 1997. Strukturiranost poznorimske poselitve Slovenije = Strukturierung spätantiker Besiedlung Sloweniens. Arheološki vestnik 48, 191–202.

Ciglenečki, S., 1999. Results and Problems in the Archaeology of the Late Antiquity in Slovenia. Arheološki vestnik 50, 287–309.

Ciglenečki, S., 2023. Between Ravenna and Constantinople. Rethinking Late Antique Settlement Patterns. (Opera Instituti Archaeologici Sloveniae, 46). Založba ZRC, Ljubljana.

Ciglenečki, S., Modrijan, Z., Milavec, T., 2020. Korinjski hrib in poznoantične vojaške utrdbe v Iliriku = Korinjski Hrib and Late Antique Military Forts in Illyricum. (Opera Instituti Archaeologici Sloveniae, 39). Založba ZRC, Ljubljana.

Gaspari, A., 2020. Ulaka, in: Horvat, J., Lazar, I., Gaspari, A. (eds.), Manjša rimska naselja na slovenskem prostoru = Minor Roman Settlements in Slovenia. Založba ZRC, Ljubljana, 141–171.

Gaspari, A., Vidrih Perko, V., Štrajhar, M., Lazar, I., 2007. The Roman Port Complex at Fizine near Portorož - Rescue Excavations in 1998. Arheološki vestnik 58, 167–218.

Guest, P., 2019. The Late Roman and Early Byzantine Coins, in: Poulter, A. et al., The Transition to Late Antiquity on the Lower Danube: Excavations and Survey at Dichin, a Late Roman to Early Byzantine Fort and a Roman Aqueduct. Oxbow Books, Oxford, 237–280.

Horvat, J., 2024. Latest research in Poetovio, in: Horvat, J. et al. (eds.), Roman urban landscape: towns and minor settlements from Aquileia to the Danube. Ljubljana, ZRC SAZU, Inštitut za arheologijo, 429–446.

Knific, T., 1991. Arheologija o prvih stoletjih krščanstva na Slovenskem (The Archaeology of the First Centuries of Christianity in Slovenia), in: Knific, T., Sagadin, M. (eds.), Pismo brez pisave. Arheologija o prvih stoletjih krščanstva na Slovenskem. Narodni muzej, Ljubljana, 11–32.

Kos, P., 1986. The Monetary Circulation in the Southeastern Alpine Region: ca. 300 BC–AD 1000. (Situla: dissertationes Musei nationalis Labacensis, 24). Narodni muzej, Ljubljana.

Kos, P., 1988. Die Fundmünzen der römischen Zeit in Slowenien. Teil I [und] Teil II. Gebr. Mann, Berlin.

Kos, P., 1994. Denarni obtok v slovenskem prostoru v pozni antiki (Summary The Monetary Circulation in Slovenian Territory in the Late Antiquity). Zgodovinski časopis 48/4, 443–447.

Kos, P., 2000. The Numismatic Evidence for the Period from the 5th to the 10th Centuries in the Area of Modern Slovenia, in: Bratož, R. (ed.), Slowenien und die Nachbarländer zwischen Antike und karolingischer Epoche : Anfänge der slowenischen Ethnogenese. Narodni muzej Slovenije, Ljubljana, 107–118.

Kos, P., 2011. Novčne najdbe = Coin Finds, in: Modrijan, Z., Milavec, T., Poznoantična utrjena naselbina Tonovcov grad pri Kobaridu. Najdbe = Late Antique Fortified Settlement Tonovcov Grad near Kobarid. Finds. Založba ZRC, Ljubljana, 221–238.

Kos, P., 2012. The Construction and Abandonment of the Claustra Alpium Iuliarum Defence System in Light of the Numismatic Material = Gradnja in opustitev obrambnega sistema Claustra Alpium Iuliarum v luči numizmatičnega gradiva. Arheološki vestnik 63, 265–300.

Kos, P., 2020. Numizmatične najdbe = Numismatic Finds, in: Ciglenečki, S., Modrijan, Z., Milavec, T., Korinjski hrib in poznoantične vojaške utrdbe v Iliriku = Korinjski Hrib and Late Antique Military

Forts in Illyricum. Založba ZRC, Ljubljana, 123–140.

Kos, P., Šemrov, A., 1995. Die Fundmünzen der römischen Zeit in Slowenien. Teil III. Gebr. Mann, Berlin.

Milavec, T., 2020. Late Antique Fortified Hilltop Settlements in Slovenia: Fifteen Years Later, in: Cavada, E. and Zagermann, M. (eds.), Alpine Festungen 400–1000. Chronologie, Räume und Funktionen, Netzwerke, Interpretationen. Akten des Kolloquiums in München am 13. und 14. September 2018 = Fortezze Alpine (secoli V–X). Cronologia, spazi e funzioni, sistemi, interpretazioni. C. H. Beck: München, 159–174.

Miškec, A., 2021. A Gold Coin of the Roman Emperor Anthemius (467–472 AD) from Črnomelj. Vjesnik Arheološkog muzeja u Zagrebu. 3. serija, 54, 99–109.

Modrijan, Z., Milavec, T., 2011. Poznoantična utrjena naselbina Tonovcov grad pri Kobaridu. Najdbe = Late Antique Fortified Settlement Tonovcov Grad near Kobarid. Finds. (Opera Instituti Archaeologici Sloveniae, 24). Založba ZRC, Ljubljana.

Moorhead, T.S.N., 2007. The Ancient and Early Mediaeval Coins from the Triconch Palace at Butrint, c. 2nd century BC–c. AD 600. Numismatic Chronicle 167, 287–304.

Noeske, H.-C., 2000. Bemerkungen zum Münzumlauf vom 5. bis zum 7. Jahrhundert n.Chr. in Ägypten und Syrien, in: Kluge, B. and Weisser, B. (eds), XII. Internationaler Numismatischer Kongress, Berlin 1997. Akten II. Staatliche Museen zu Berlin, Berlin, 812–820.

Reece, R., 1972. A Short Survey of the Roman Coins Found on Fourteen Sites in Britain. Britannia 3, 269–276.

Reece, R., Hurst, H.R., 1994. Coins. With an Appendix on Hoards, in: Hurst, H.R., Excavations at Carthage: The British Mission. Vol. II, 1: The Circular Harbour, North side: The Site and Finds Other than Pottery. Oxford University Press, Oxford, 249–260.

Šašel Kos, M., 1994. Romulovo poslanstvo pri Atilu (Summary The Embassy of Romulus to Attila). Zgodovinski časopis 48/3, 285–295.

Šemrov, A., 1998. Die Fundmünzen der römischen Zeit in Slowenien. Teil IV. Gebr. Mann, Berlin.

Šemrov, A., 2004. Die Fundmünzen der römischen Zeit in Slowenien. Teil V. Philipp von Zabern, Mainz am Rhein.

Šemrov, A., 2010. Die Fundmünzen der römischen Zeit in Slowenien. Bd. 6. Moneta, Narodni muzej Slovenije, Wetteren, Ljubljana.

Žerjal, T., Novšak, M., 2020. Školarice pri Spodnjih Škofijah. (Arheologija na avtocestah Slovenije 86). Zavod za varstvo kulturne dediščine Slovenije, Ljubljana.

Županek, B., 2021. Late Roman Emona: Understanding the Transformation of the City. Zgodovinski časopis 75/1–2, 26–41.

# A Small Hoard of Nicaean Coins discovered in Moesia Inferior*

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**Abstract:** Our work presents a hoard of Roman coins discovered in the early 2000s with the help of a metal detector, approximately 3.5 km northeast of the village of Ostrov (Constanța County, Romania), where a part of the site from Durostorum is located. The small hoard contains ten bronze coins minted in Nicaea (Bithynia) by Severus Alexander (nine pcs.) and Gordianus III (one pc.). All issues feature 'military' designs (three and four standards) on the reverse. Among these, we managed to identify four new reverse motifs (var. 3b; var. 7b; var. 18d; var. 23f). The analysis of coin discoveries from Nicaea, both isolated and in hoards, revealed that these bronze issues did not play a significant role in the monetary circulation in Moesia Inferior. Exceptionally, only at the site of Durostorum were discovered 65 coins from Nicaea (51 genuine issues and 14 cast imitations) bearing the effigies of the emperors Severus Alexander and Gordianus III and featuring 'military' standards on the reverse. The hoard may have represented the 'pocket money' of a person who lived in the hypothetical villa rustica near Ostrov and who was closely connected to the centre of Durostorum.

**Keywords:** Hoard, Nicaean coins, 'military' design, Moesia Inferior, Durostorum.

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## 1. Discovery of the Hoard

The following hoard was discovered at the beginning of the 2000s with the help of a metal detector, in a location above the Constanța-Ostrov/Silistra highway (DN 3). Close to the Danube, the point is called 'Regie', near the spring known as 'Mama apelor' or 'Stutina Vodă'. The discov-

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ery site is supposed to correspond to a plateau, locally known as '*La parapet*', from which funerary discoveries specific to the second half of the 2nd century are also known (Chera-Mărgineanu 1978, 140). Additionally, with the publication of the funerary discoveries, it was suggested that they could belong to a larger complex, presumably a *villa rustica*, with such constructions being considered 'frequent in this suburban area of Durostorum' (Chera-Mărgineanu 1978, 140).

The discovery point is near the town of Silistra (Silistra District, Bulgaria) and the village of Ostrov (Constanța County, Romania), about 3.5 km in the northeast direction from the latter (**Fig. 1**). The southeast area of Silistra city is correlated with the positioning of the *legio XI Claudia* fortress (brought here by Traianus probably in the context of the second Dacian war, in AD 105–106), based on archaeological discoveries such as the fortress walls, internal towers, *tegulae* with the legion's stamp, epigraphic monuments, coins, etc. (*И*ванов et al. 2006, 166–180). Besides the military camp itself, we also note the existence of two civilian settlements, found in its immediate vicinity (*canabae Aeliae legionis XI Claudiae*) and 3 km towards the east in the locality of Ostrov, at the point "Farm 4 Regie" (Damian, Bâltâc 2007, 61–70). The city and the *canabae* would obtain the title *Municipium Aurelium Durostorum*, experiencing significant development in the 2nd and 3rd centuries AD, based on numerous public and private buildings discovered through archaeological excavations (Atanasov 2007, 447; Damian, Bâltâc 2007, 62).

In addition to the major archaeological sites mentioned, the entire area between the current localities of Ostrov and Silistra bear lots of ancient discoveries (specifically from the 2nd and 3rd centuries AD), such as jewellery pieces, accessories, ceramics, lamps, coins, glass vessels, statuettes, etc. (Mușețeanu, Elefterescu 1978, 105–111; Mușețeanu, Elefterescu 2004, 95–142; Elefterescu 2004–2005, 221–238; Dima, Elefterescu 2009; Arbunescu 2017, 191–208; Elefterescu 2017, 79–116; Boțan, Elefterescu 2018; Nuțu, Elefterescu 2018 etc.).

Due to the unclear conditions in which it was found (by metal detector) and given the long time that has elapsed since its discovery, we do not know the original size and composition of the hoard. According to the statements of the detectorists, recorded by the authorities, the deposit contained only ten bronze coins. Unfortunately, this is no longer verifiable today.

**Fig. 1.** The hypothetical area of discovery of the monetary hoard.

## 2. Catalogue of the Coins

The ten coins of the hoard were minted in Nicaea (Bithynia) by Severus Alexander (nine pcs.) and Gordianus III (one pc.). All of them feature 'military' designs (three and four standards) on the reverse. This particular category of issues is well known in the specialised literature, mainly thanks to the detailed research of numismatists from Serbia conducted over the last few decades. Thus, for the identification of the coins we used, besides the classic catalogues (BMC Bithynia, WBR, and SNG Copenhagen) and the more recent ones (Weiser 1983) — all quite general — the works of Serbian specialists. Therefore, we referred to the typology made by N. Crnobrnja, who identified 28 different reverse types (Црнобрња 1981). Over time, this classification was enriched and detailed by introducing five new types and 52 variants of the basic types (in total, 89 different designs) (Vojvoda 2023, 107 and note 13, 117). As M. Vojvoda noted, this system of organising the images on the reverse is quite complex and has some deficiencies, proving its limits when new series of variants were added (Vojvoda 2023, 107).

Most recently, M. Vojvoda proposed a new typology for the coins from Nicaea featuring 'military' designs, which we also used in our catalogue. She divided the 89 known types and reverse variants (referred to as 'motifs') into two main groups based on the number of standards. Within the groups, the motifs were arranged according to different iconographic elements associated with the standards (*phalerae, aquilae*, capricorns, or wreaths). It is worth noting that all motifs were redrawn and graphically presented in a uniform manner (Vojvoda 2023, 108–117). Although it is considered a 'working draft,' the typology proposed by the Serbian researcher is organised according to clear criteria and is highly flexible, allowing for the addition of new motifs.

At the same time, we used the RPC catalogue for identifying our coins. Volume VI, which contains the issues of Severus Alexander, is available only online, so the numbers are provisional. Although the arrangement of the coins by number and, respectively, within each number is not definitive and presents some deficiencies, we constantly referred to this extremely generous numismatic database.

The state of conservation of the coins in the hoard appears to be varied. Some of them are in good condition, and even have a patina; in certain cases, the reliefs of letters and images are visible. In contrast, other pieces seem to be in poor condition, making them difficult to identify. We believe their deterioration is not due to circulation, but rather to corrosion in the soil and improper storage conditions after they were unearthed. Unfortunately, until their legal status was clarified, the coins could not be cleaned and restored by specialists.

### Nicaea (Bithynia)

#### Severus Alexander (AD 222–235)

**Obv. M AVP CEVH ΑΛΕΞΑΝΔΡΟC AVГ (var. AV and AГ)**

Obv. […]P CEVH ΑΛΕΞΑΝΔΡΟC; […] Laureate, draped, and cuirassed bust of Severus Alexander, right, seen from rear.

Rev. NI – K – AI – E / ΩN; Three military standards, with two *phalerae* on each standard (type 1 / motif I.1/1).

BMC Bithynia, 168, no. 100 var.; WBR, 477, no. 617, Pl. LXXXIII/9 var.; Црнобрња 1981, 11, no. 30 var.; 12, nos. 35–41, 44–48 var.; Weiser 1983, 213, no. 030 var.; Vojvoda 2023, 108, no. I.1/1; RPC VI 3202 var. (https://rpc.ashmus.ox.ac.uk/coins/6/3202); for the rev. only see: 3202/15, 18, 37, 41.

**1.** AE; 5 g; 19x20 mm; 12 h; badly preserved; struck off-centre on the obv. and rev. (**Fig. 2/1**).

Obv. […]CEVH AΛEΞANΔPOC [AVΓ]; Laureate, draped, and cuirassed bust of Severus Alexander, right, seen from rear.

Rev. N – IK – AI – E / ΩN; Three military standards, with three *phalerae* on the middle standard and with two *phalerae* on the lateral standards (type 3 / motif I.1/3).

BMC Bithynia, 168, no. 103 var.; WBR, 477, no. 617, Pl. LXXXIII/9 var.; SNG Kopenhagen 520 var.; Црнобрња 1981, 11, nos. 21–25; Vojvoda 2023, 109, no. I.1/3; RPC VI 3202/42 (https://rpc.ashmus.ox.ac.uk/coin/441813); 3248/18 (https://rpc.ashmus.ox.ac.uk/coin/258491).

**2.** AE; 4 g; 19 mm; 1 h; very badly preserved; struck off-centre on the obv. and rev. (**Fig. 2/2**).

Obv. […]EVH AΛEΞANΔPOC AΓ; Laureate, draped, and cuirassed bust of Severus Alexander, right, seen from rear.

Rv. N – IK – AI – E / ΩN; Three military standards, with three *phalerae* on the middle standard and with two *phalerae* on the lateral standards (var. 3b / motif I.1/3 - **Fig. 3/1**).

BMC Bithynia, 168, no. 103 var.; WBR, 477, no. 617, Pl. LXXXIII/9 var.; SNG Kopenhagen 520 var.; Црнобрња 1981, 12, no. 42 var.; Vojvoda 2023, 109, no. I.1/3; RPC VI 3248 var. (https://rpc.ashmus.ox.ac.uk/coins/6/3248), 3249 var. (https://rpc.ashmus.ox.ac.uk/coins/6/3249); for the rev. only see: 3261/15 (https://rpc.ashmus.ox.ac.uk/coin/256116).

**3.** AE; 4.257 g; 18x19 mm; 12 h; well preserved; struck off-center on the obv. and rev. (**Fig. 2/3**).

Obv. […]VP CEVH AΛEΞANΔPOC AV; Laureate, draped, and cuirassed bust of Severus Alexander, right, seen from rear.

Rev. NI – KA – IE – ΩN (ΩN in ligat.); Three military standards, with four *phalerae* (three of normal size, one of small size) on the middle standard and with three *phalerae* on the lateral standards (var. 9c / motif I.1/7).

BMC Bithynia, 168, no. 100; WBR, 477, no. 617, Pl. LXXXIII/10 var.; Војвода 2011, 246, Fig. 2, no. 9c; Vojvoda 2023, 110, no. I.1/7; RPC VI 3195 var. (https://rpc.ashmus.ox.ac.uk/coins/6/3195).

**4.** AE; 5.603 g; 19x20 mm; 1 h; badly preserved; struck slightly off-centre on the rev. (**Fig. 2/4**).

Obv. M AVP CEVH AΛEΞANΔPOC AVΓ; Laureate, draped, and cuirassed bust of Severus Alexander, right, seen from rear.

Rv. NI – K – AI – E / ΩN; Three military standards; *aquila* on the middle standard with two *phalerae* and lateral standards with three *phalerae* on each; eagle head left (var. 18d / motif I.2/5 - **Fig. 3/3**).

BMC Bithynia, 168, no. 104 var.; WBR, 477, no. 616 var.; SNG Kopenhagen 520 var.; Vojvoda 2023, 111, no. I.2/5; RPC VI 3198 (https://rpc.ashmus.ox.ac.uk/coins/6/3198) (3198/2 - https://rpc.ashmus.ox.ac.uk/coin/320380 - probably the same pair of dies).

**5.** AE; 4.075 g; 20 mm; 6 h; well preserved; struck slightly off-centre on the rev. (**Fig. 2/5**).

**Obv. M AVP CEV AΛEΞANΔPOC AVΓ (var. VΓ in ligat., AV and A)**

Obv. M AVP CEV AΛEΞANΔPOC AVΓ (VΓ in ligat.); Laureate, draped, and cuirassed bust of Severus Alexander, right, seen from rear.

Rv. NI – KA – IE – ΩN (ΩN in ligat.); Three military standards, with two *phalerae* on each

standard (type 1 / motif I.1/1).

BMC Bithynia, 168, no. 102 var.; WBR, 477, no. 617, Pl. LXXXIII/9 var.; Црнобрња 1981, 14, nos. 84–85; Weiser 1983, 213, no. 030 var.; Vojvoda 2023, 108, no. I.1/1; RPC VI 3202/32 (https://rpc.ashmus.ox.ac.uk/coin/258646 - probably the same pair of dies).

**6.** AE; 4.121 g; 19x22 mm; 1 h; well preserved; struck off-centre on the obv. and rev. (**Fig. 2/6**).

Obv. M AVP CEV AΛE[ΞANΔPOC] AV; Laureate, draped, and cuirassed bust of Severus Alexander, right, seen from rear.

Rv. [N]I – K – A – IE / [ΩN]; Three military standards, with three *phalerae* on the middle standard and with two *phalerae* on the lateral standards (type 2 / motif I.1/3).

BMC Bithynia, 168, no. 102 var.; WBR, 477, no. 617, Pl. LXXXIII/9 var.; Црнобрња 1981, 15, nos. 100–102 var.; Vojvoda 2023, 109, no. I.1/3; RPC VI 3248 var. (https://rpc.ashmus.ox.ac.uk/coins/6/3248); for the rev. only see: 3201/15 (https://rpc.ashmus.ox.ac.uk/coin/245538).

**7.** AE; 5.896 g; 20 mm; 7 h; well preserved; struck off-centre; on the obv. and rev. (**Fig. 2/7**).

Obv. M [AVP] CEV AΛEΞANΔP[OC] A; Laureate, draped, and cuirassed bust of Severus Alexander, right, seen from rear.

Rv. NI – K – AI – E / ΩN; Three military standards, with three *phalerae* on the middle standard and with two *phalerae* on the lateral standards (type 2 / motif I.1/3).

BMC Bithynia, 168, no. 102 var.; WBR, 477, no. 617, Pl. LXXXIII/9 var.; Vojvoda 2023, 109, no. I.1/3; RPC VI 3202/5 (https://rpc.ashmus.ox.ac.uk/coin/247370); 3248 var. (https://rpc.ashmus.ox.ac.uk/coins/6/3248).

**8.** AE; 4.160 g; 19 mm; 1 h; badly preserved; struck off-centre on the obv. (**Fig. 2/8**).

Obv. M AVP CEV AΛEΞANΔPOC AVΓ; Laureate, draped, and cuirassed bust of Severus Alexander, right, seen from rear.

Rv. [N]I – KA – IE – ΩN (ΩN in ligat.); Three military standards, with three *phalerae* on each standard; the middle *phalerae* of the lateral standards are small in size (var. 7b / motif I.1/5 - **Fig. 3/2**).

BMC Bithynia, 168, no. 102 var.; WBR, 477, no. 617, Pl. LXXXIII/10 var.; Црнобрња 1981, 15, nos. 100–102 var.; Vojvoda 2023, 109, no. I.1/5; RPC VI 3202 var. (https://rpc.ashmus.ox.ac.uk/coins/6/3202); 3248 var. (https://rpc.ashmus.ox.ac.uk/coins/6/3248).

**9.** AE; 3.960 g; 19x20 mm; 6 h; well preserved; struck lightly off-centre on the obv and rev. (**Fig. 2/9**).

### Gordianus III (AD 238–244)

Obv. M ANT ΓORΔIAN[OC AVΓ]; Radiate, draped, and cuirassed bust of Gordian III, right, seen from front.

Rv. N – I – K – A – I / EΩN; Four military standards; two *aquilae* on the middle standards with three *phalerae* and lateral standards with two *phalerae*; eagles' heads facing centre (var. 23f / motif II.2/2 - **Fig. 3/4**).

BMC Bithynia, 171, no. 119 var.; WBR, 489, no. 711 var.; Војвода, Бранковић 2016, 107, Fig. 1/var. 23c; 128, no. 168; Vojvoda 2023, 115, no. II.2/2; RPC VII.2 1966/3 (https://rpc.ashmus.ox.ac.uk/coin/107332).

**10.** AE; 2.453 g; 19x20 mm; 1 h; badly preserved; struck lightly off-centre on the rev. (**Fig. 2/10**).

**Fig. 2.** Coins from the hoard discovered in the vicinity of Durostorum.

## 3. Numismatic Comments

Although the hoard is modest in size, it contains some remarkable coins, which we will briefly present. One issue from Severus Alexander (Cat. no. 3), which is preserved in relatively good condition, features an unusual obverse legend that ends in AΓ. This legend variant is probably different from the one identified in A. Crnobrnja's study, taken as representing the letters AVΓ in ligature (Црнобрња 1981, 12, nos. 35–43). Additionally, the reverse image of this issue was not found among the motifs identified by Serbian researchers. We believe it could be a variant of type 3, slightly different from variant 3a, identified by A. Crnobrnja and J. Vasić Derimanović (Црнобрња, Васић Дерименовић 2017, p. 36, Fig. 1; 46, no. 15). We have named this new variant 3b (**Fig. 3/1**), and it would belong to the category with three insignia, with three *phalerae* on the middle standard and two *phalerae* on the lateral standards (Vojvoda 2023, 109, no. I.1/3). In the RPC online database, we managed to identify a coin from online trade, where the emperor's head is radiate, and the reverse seems similar to ours.[1]

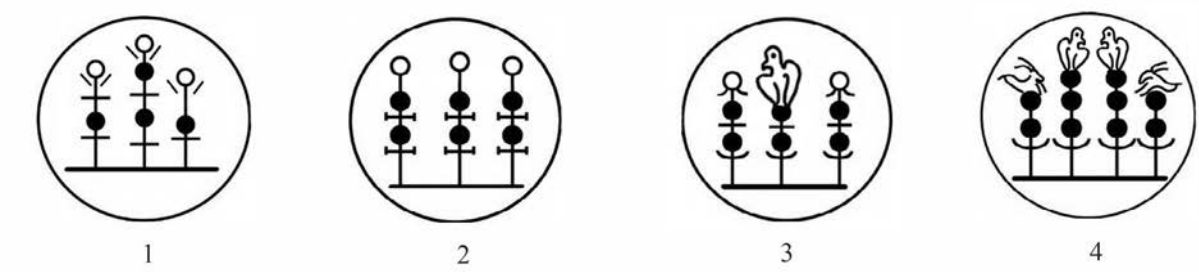


**Fig. 3.** New variants of obverses (1 - var. 3b; 2 - var. 7b; 3 - var. 18d; 4 - var. 23f).

Another coin from the same emperor (Cat. no. 4) has a relatively rare reverse variant (9c). In the literature consulted, we have encountered this motif only in the case of two coins from Severus Alexander, one from the Vise Grobalja necropolis in Viminacium (Војвода 2013, 181, no. 192) and the other, discovered in the territory of the city of Belgrade (Pustara, Batajnica) (Црнобрња, Васић Дерименовић 2017, 46, no. 17). The obverse legend of both pieces ends in AVΓ. We managed to identify a coin in RPC,[2] from the online trade, which, like our issue, has the obverse legend ending in AV, but contains CEV at the beginning of the same legend. Additionally, a specimen with similar reverse iconography (var. 9c), but from Julia Mamaea, is located at the National Museum in Šabac and comes from the village of Banovo Polje (Municipality of Bogatić, Serbia) (Војвода, Петровић 2011, 293, no. 16).

The only issue from the hoard featuring an *aquila* between standards (Cat. no. 5), from Severus Alexander, also presents a new reverse motif. The image resembles both types 17 and 18 from N. Crnobrnja's typology, making its precise classification difficult. We chose to consider it as a variant of type 18, which we named var. 18d (**Fig. 3/3**); it belongs to the class with three insignia, with the *aquila* (two *phalerae*) between two standards with three *phalerae* on each (Vojvoda 2023, 111, no. I.2/5). This new motif is the second in the group, where the eagle appears with its head to the left, the first being recently identified on a coin from Gordianus III (Vojvoda et al. 2021, 69, no. 72; Vojvoda 2023, 111, no. I.2/5). In the RPC, we identified two coins similar to ours, which, unfortunately, are very worn. One of them[3] appears to have been struck with the same pair of dies, and the second,[4] with a similar pair of dies.

[1] https://rpc.ashmus.ox.ac.uk/coin/256116
[2] https://rpc.ashmus.ox.ac.uk/coins/6/3195
[3] https://rpc.ashmus.ox.ac.uk/coin/320380
[4] https://rpc.ashmus.ox.ac.uk/coin/262148

The last coin from Severus Alexander (Cat. no. 9) also presents a distinctive reverse variant, where the middle *phalerae* of the two lateral standards are very small. This motif shows similarities with both types 5 and 7. It might be a new variant of type 7, which we named var. 7b (**Fig. 3/2**) and belongs to the category with three insignia with three *phalerae* on each standard (Vojvoda 2023, 109, no. I.1/5). Unfortunately, we were unable to identify a coin in the RPC catalogue with a reverse design similar to ours.

The only issue from Gordianus III in the hoard (Cat. no. 10) has a reverse motif similar to var. 23c, identified on a Nicaean bronze in the numismatic collection of the National Museum in Požarevac (Војвода, Бранковић 2016, 128, no. 168). The difference is that on our coin, the eagles' heads are obviously facing the centre, while in the drawing of var. 23c, the birds' heads are oriented outwards. The illustration of that coin shows it was struck off-centre on the reverse (Војвода, Бранковић 2016, 107, Fig. 1/var. 23c, 142, Tab. II, no. 168; Vojvoda 2023, 115, no. II.2/2). In this case, it could be a new variant (var. 23f.) (**Fig. 3/4**) attested for the first time in our hoard.

If our identifications are correct, then it is remarkable that in such a small group of coins one can find so many new reverse motifs. We have attempted to illustrate them accordingly, and for this, we used the model proposed by M. Vojvoda (Vojvoda 2023).

## 4. Finds of Nicaean Coins in Dacia and Moesia Inferior: The Site of Durostorum

In a recent study, D. Calomino conducted a thorough analysis of the bronze coins from Nicaea of Severus Alexander and Gordianus III featuring 'military' designs (standards), which circulated in the 'Balkan' or 'Danube' provinces (Calomino 2019). The most numerous findings of this kind (approx. 2,500 pcs., of which over 1,200 have been published) come from northern Serbia, which belonged to the province of Moesia Superior and the southeastern part of Pannonia Inferior. Here, the Nicaean bronzes are concentrated in three areas: the territory of Viminacium, the Morava land road, and the lower Sava Valley. As we move away from these regions, the number of discoveries in the Balkan area significantly decreases (Vojvoda, Crnobrnja 2018; Vojvoda 2023, 104–105; Calomino 2019, 141–147). It is assumed that these coins minted in Nicaea were intentionally directed (shipped in stocks or carried along by the troops) towards the territory of Viminacium, as part of a provincial and/or imperial decision (the so-called Bithynian solution). Through their particular military design, they were meant for the army, not as wages, but as a small change supply for daily usage, to enter the market thus. Their purpose was to temporarily supplement the shortage of small change in circulation, caused by the decrease in production of imperial bronze denominations and the absence of local coinage. From the territory of Viminacium, the Nicaean bronzes with standards on the reverse spread to neighbouring regions through normal monetary circulation and the movement of people coming from Moesia Superior (Calomino 2019, 148–156).

We will focus our attention on the finds of Nicaean coins in two areas of the empire — the provinces of Dacia and Moesia Inferior, which, to some extent, are related to our hoard. In the case of Dacia, some synthesis studies have recorded almost 300 single finds of Nicaean coins (Calomino 2019, 143–144, using data from Găzdac 2010 and Petac 2011). A more detailed analysis reveals that these issues (291 pcs.) account for 45% of the total provincial coins from the lists of Dacian sites. Most of them are dated during the reign of Severus Alexander (188 pcs.), when the majority of the bronze issues occurred in the province, and Gordianus III (42 pcs.), when they are only surpassed by the coins from Viminacium (Munteanu 2017 CD-ROM, Tabs. 29–32, Graphs 64–66). We note that over three-quarters of the coins from Nicaea were discovered in civilian settlements in Dacia, with most such pieces coming from sites in the southern part of the province, near the Danube (Munteanu 2017, 108–111, 141–142). Regarding Dacia, it's worth mentioning the less plausible hypothesis of D. Benea, who considered that such coins, along with others, could have reached the province through the payments to soldiers who participated in the eastern campaigns of Severus Alexander and Gordianus III (Benea 2006a; Benea 2006b, 105–106).

The single finds of Nicaean coins in the second area, the province of Moesia Inferior, are less

documented than in Dacia. In general, specialists have paid special attention to the Romanian Dobruja, representing the northeastern part of the province of Moesia Inferior. In the only synthesis work on the monetary circulation in the territory between the Danube and the Black Sea, a mere 22 single finds from Nicaea were listed (Vertan 2002, 304, 312, 375, 394–395, 410, 464, 473, 481, 487; similar data, see at Poenaru Bordea 2000, 190), more than half belonging to the period of Septimus Severus to Caracalla. In another study, only general data about 85 such issues, which would date between AD 193–235 and were mostly discovered in the Danubian area, are presented (Oberländer-Târnoveanu, Oberländer-Târnoveanu 2000, 407, Tab. 1, 410–411, 414, Map 4, 415, 417). Unfortunately, for the rest of the province of Moesia Inferior, the information about the isolated discoveries of Nicaean bronzes is much scarcer and scattered in various local publications, which are less accessible. Only a relatively small number of such pieces are recorded in recent works, such as site monographs and museum numismatic collection catalogues (Calomino 2009, 145–146 and note 53).

The discovery site of the hoard is in the immediate vicinity of the Roman settlement at Ostrov: "Farm 4", which belongs to the site of Durostorum. At this moment, from a numismatic point of view, this is probably one of the best-documented sites in Moesia Inferior, thanks to the research of M. Dima (Dima, Elefterescu 2009; Dima 2010; Dima 2023). His most recent work examines 2,954 coins from the period of Augustus to Diocletianus, which were discovered in different parts of the Durostorum site (Ostrov – 807 pcs. and Silistra – 2,147 pcs.) and are located in various collections in Romania and Bulgaria (Dima 2023, 11–15, 281–301). In total, in this important site, 78 bronze coins minted in Nicaea were recorded, as well as another 24 cast imitations based on original issues from Nicaea. The brief chronological analysis of this unexpectedly large sample reveals interesting information.

The oldest coins minted in Nicaea from that batch bear the effigies of the emperors Domitianus (one pc.) (Dima, Elefterescu 2009, 127, no. 540), Antoninus Pius (two pcs.) (Dima 2023, 80), and Commodus (three pcs.) (Dima, Elefterescu 2009, 127, nos. 541–542; Dima 2023, 119). The piece from Domitianus was countermarked in Tonzos, probably in the middle of the 2nd century AD (Dima 2023, 80).

A considerable number of issues from Nicaea (20 pcs.) belong to Septimius Severus and his family. Most of them (15 pcs.) come from the Ostrov area (Dima, Elefterescu 2009, 127–129, nos. 543–557), with the rest (five pcs.) having been found in the Silistra area (Dima 2023, 134). In this period ( AD 193–211), they represent 4.6% of the total coins discovered at the site and, respectively, 5.8% of the total provincial issues, being surpassed in number only by the bronzes from Moesia Inferior and those from Thrace (Dima 2023, 129–133, 282, Tab. 4, 286, Tab. 11, 290, Tab. 18, 295, Tab. 25, 300, Tab. 33). A significant amount of coins minted by Septimus Severus *et sui* in Nicaea have been discovered in only two other sites in Dobruja: Noviodunum (11 pcs.) (Schultz 1978, 100–101, nos. 8–11; Popescu, Iacob 2016, 40–41, nos. 34–39; 42, no. 43) and Histria (14 pcs.) (Preda, Nubar 1973, 154, nos. 996–1003; Poenaru Bordea 1982, 150, nos. 18-20, Poenaru Bordea, Dima 2007, 161, no. 48). At the Danube site, they are the most numerous provincial bronzes, and at the coastal one, they are only surpassed by local issues (Dima 2023, 134). A possible explanation for the large number of coins from Nicaea discovered in Dobruja could be the 'import' of these small denominations from their area of origin. During this period, they would have had a favourable exchange rate compared to the Moesian currency (Dima 2023, 134–135 and note 1016).

From the time of Elagabalus, only a single issue from Nicaea was recorded at Durostorum (Dima 2023, 150).

The most substantial lot consists of bronzes minted by Severus Alexander at the Bithynian mint (38 pcs.). Most of them (36 pcs.) were discovered in the Silistra area (Dima 2023, 161 and note 1263), with only two pieces coming from the Ostrov site (Mihailescu-Bîrliba, Chiriac 2000, 446, no. 2; Dima, Elefterescu 2009, 129, no. 558). Although most of the coins are not described or illustrated, the author states that nearly all belong to the type with three standards on the reverse and can be divided into ten variants (Dima 2023, 162). In this chronological sequence (AD 222–235), the bronzes from Nicaea constitute 28.4% of the total monetary discoveries and,

respectively, 80.9% of the provincial pieces from Durostorum (Dima 2023, 161–162, 282, Tab. 4, 286, Tab. 11, 290, Tab. 18, 295, Tab. 25, 300, Tab. 33).

The monetary pool of Moesia Inferior during the time of Severus Alexander is predominantly made up of imperial denominations and bronzes from local mints, which were still operational (Dima 2023, 153–162). Only in a small number of sites are a few Nicaean coins to be found. These centres are located both in the coastal area – Vadu (Constanța County, one pc.) (Munteanu, Ocheșeanu 1975, 206, no. 54/8) and Agigea (Constanța County, one pc.) (Mitrea 1972, 361, no. 1) – as well as near the Danube – Noviodunum (two pcs.) (Popescu, Iacob 2016, 41, nos. 40–41), Sucidava (one pc.) (Dima 2023, 162), or Novae (one pc.) (Ciołek, Dyczek 2011, 79, no. 112).

In the following period, a very similar situation is noted. At Durostorum, there is a relatively large batch of Nicaean coins with the effigy of Gordianus III and military standards (13 pcs.), which mainly were (nine pcs.) discovered in the Silistra area (Dima 2023, 178) and, to a lesser extent (four pcs.), at Ostrov (Poenaru Bordea et al. 1997, 86, no. 54; Dima, Elefterescu 2009, 129–130, nos. 559–561). They represent 13.7% of the total coins from this emperor and, respectively, 30.1% of his provincial issues (Dima, 2023, 180, 282, Tab. 4, 286, Tab. 11, 290, Tab. 18, 295, Tab. 25, 300, Tab. 33). By comparison, in the rest of the sites in the province, most of the bronze coins were minted at workshops in Moesia Inferior, Thrace, and, more recently, in Moesia Superior (Viminacium) (Dima 2023, 177–183). The Nicaean issues are recorded only in the following sites: Histria (one pc.) (Isvoranu, Dabîca 2014, 159–160, no. 17), Noviodunum (one pc.) (Popescu, Iacob 2016, 41, no. 42), Sucidava (two pcs.) (Dima 2023, 181 and note 1399), Novae (one pc.) (Ciołek, Dyczek 2011, 82, no. 123), and probably Nicopolis ad Istrum (one pc.) (Butcher 1995, 278, no. 74).

*Municipium Aurelium Durostorum* stands out from all other sites in Moesia Inferior due to the unusually large number of Nicaean coins of Severus Alexander and Gordianus III carrying military standards (51 pcs.). Attempts have been made to explain this situation through the military character of the site and/or the favourable exchange rate in the province for Nicaean bronzes, especially those from Severus Alexander (Dima 2023, 161–162). However, such explanations do not apply to the particular case of Durostorum, but rather have a general character for the entire region of the Lower Danube.

Starting with the reign of Philippus Arabs, the bronzes of the Bithynian city disappear from Durostorum and are very rare throughout the province.

Besides the original coins made by striking, cast imitations (24 pcs.) after prototypes from Nicaea were also discovered at Durostorum. The lot recovered from the Ostrov area is more numerous (15 pcs.) and more diverse chronologically, containing coins from Commodus (one pc.), Septimius Severus (eight pcs.), Severus Alexander (one pc.), Gordianus III (three pcs.), and unidentified emperors (two pcs., one with three standards on the reverse) (Dima, Elefterescu 2009, 184–186, nos. 953–966; Dima, Talmațchi 2002, 77, note 38). The imitations from the Silistra area exclusively use prototypes with military standards on the reverse, from Severus Alexander (four pcs.), Gordianus III (one pc.), and unidentified emperors (4 pcs.) (Dima 2023, 227). Recent studies have shown that these cast imitations, with a rather haphazard appearance, were likely produced exactly at Durostorum, within or near the Roman settlement at Ostrov – "Farm 4" in two stages over a relatively short period (AD 225–250). The purpose of these counterfeits was to temporarily compensate for the shortage of small change, which was no longer produced in the civic mints of Moesia Inferior since the time of Elagabalus (Dima, Talmațchi 2002, 72–75; Dima 2011, 34–36; Dima 2023, 225–233).

## 5. Hoards with Nicaean Coins in Dacia and Moesia Inferior

The discovery of a hoard composed exclusively of bronze coins from Nicaea is a noteworthy find. To date, in the specialised literature, only a single similar deposit is mentioned, located in Barbaricum, at Janapolė – Dargeliszkie (Telšiai County, Lithuania). It contained 2 kg of bronze coins, all from Nicaea (ca. 280–340 pcs.) and two locally made bronze bracelets, all housed in a ceramic pot. Only 17 coins from Caracalla (one pc.), Severus Alexander (three pcs.), Maximinus

Thrax (five pcs.), and Gordianus III (eight pcs.) were recovered. All these pieces, appropriately illustrated, have 'non-military' designs (Михельбертас 1968; Михельбертас 2010).

However, we have no other knowledge of similar discoveries within the Roman world. Up to now, the CHRE database has validated 25 hoards from the empire that include issues of the city from Bithynia and cast imitations thereof. Among these, the Archar 1953 hoard (Vidin District, Bulgaria) (*t.p.q*. AD 222–235), near the site at Ratiaria, contains the most Nicaean bronzes (29 pcs.).[5] The majority of them bear the effigies of the emperors Septimius Severus and Caracalla (19 pcs.), and some of the later pieces that have been published feature military standards on the reverse (Божкова 1986, 46, nos. 19, 21–23).

In the territory of Dacia, five coin hoards that would include coins from Nicaea in their composition are recorded. The oldest among them – Jeledinți (Hunedoara County, Romania,*t.p.q.* AD 238–244) and Desa 2015 (Dolj County, Romania,*t.p.q.* AD 244) – are made up of imperial silver denominations, to which a Nicaean issue is associated in both cases (Petac 2011, 245, no. 88; Dumitrescu 2022, 108, no. 220). Whether these bronze coins belong to the respective hoards is debatable. A doubtful deposit, probably representing an assemblage of silver and bronze coins dated over half a millennium, was discovered at Hunedoara (Hunedoara County, Romania). It would have also included two issues from Nicaea, from Elagabalus or Severus Alexander.[6] The last two hoards originate from the site of Dierna – Orșova 1934 and Orșova II (Mehedinți County, Romania). Both consist of a variety of Roman bronze and silver denominations and conclude in the second half of the 4th century. The first contains a Nicaean bronze coin from Severus Alexander (Chirilă et al. 1974, 18, no. 3) and the second, two similar issues of the same emperor and one of Gordianus III (Chirilă et al. 1974, 29–30, nos. 6-8), all with 'military' designs. Unlike the previous situations, their belonging to hoards is certain, probably representing residual pieces from the monetary circulation during the Principate period. Geographically, these hoards are more closely linked to Moesia Superior.

It is interesting to note that the majority of hoards containing coins from Nicaea and cast imitations come from the territory of the province of Moesia Inferior (14 hoards, of which 11 are registered in CHRE). Unfortunately, very few of them have been systematically studied and published. Most of these (nine hoards) conclude in the period AD 222–249, with only a few exceeding the reign of Philippus Arabs. Their composition includes imperial silver denominations and, more rarely, bronze provincial issues and cast imitations. In all hoards, the Nicaean bronzes and their imitations take a marginal stand, being of a limited number. They are dated over a wide period, from Marcus Aurelius to Trebonianus Gallus, most belonging to the reigns of Septimius Severus, Caracalla and, respectively, Severus Alexander and Gordianus III.

The Nicaean issues of the last two emperors were recorded only in a few hoards: Northern Dobruja (*t.p.q*. AD 229; 1 AE Severus Alexander, cast imitation) (Dima 2011, p. 34, no. 52), Canlia (Constanța County, Romania; *t.p.q*. AD 247; 1 AE Severus Alexander, 2 AE Gordianus III) (Dima, Talmațchi 2002, 64, nos. 5–7), Malinovo (Lovech District, Bulgaria; *t.p.q*. AD 249–251; 7 AE Severus Alexander) (Гущераклиев 1993, 363, no. 21), Popovo 3 (Targovishte District, Bulgaria; *t.p.q*. AD 238–244; 1 AE Severus Alexander) (Драгоев 2012, 198, no. 58), Shumen County 2 (Bulgaria; *t.p.q*. AD 251–253; 2 AE Severus Alexander; 2 AE Gordianus III),[7] and Northern Bulgaria (Vidin region?; *t.p.q*. AD 222–235; 5 AE Gordianus III, cast imitations) (Draganov, Varbanov 2021, 425). In all cases where the coins have been properly published, they bear 'military' designs on the reverse.

In general, hoards containing pieces from Nicaea seem to be quite uniformly distributed across the territory of Moesia Inferior, with no visible tendency for their concentration in any particular area of the province. Only two of such deposits are located in the vicinity of the site

[5] https://chre.ashmus.ox.ac.uk/hoard/10066
[6] https://chre.ashmus.ox.ac.uk/hoard/3494
[7] https://chre.ashmus.ox.ac.uk/hoard/10441

at Durostorum. The hoard from Canlia, already mentioned, was discovered approximately 20 km east of Ostrov and contains three pieces with military standards on the reverse. Another deposit from Rositsa (Dobrich District, Bulgaria; *t.p.q*. AD 253–260), about 50 km southeast of Silistra, has a Nicaean bronze from Septimius Severus (Tacchella 1893, 77, no. 47). Probably related to the site on the Danube could be another two hoards presumed to have been discovered in the southwest of Dobruja (*t.p.q*. AD 229) and in the north of this historic province. Both contain a cast imitation after genuine coins minted in Nicaea by Septimius Severus (for Geta) (Dima 2011, p. 17, no. 56) and Severus Alexander (Dima 2011, p. 34, no. 52). Quite likely, both coins were cast in a workshop at Durostorum.

## 6. Closing remarks

At first glance, the occurrence of a Nicaean coin hoard, although small in size, in the territory of Moesia Inferior may seem somewhat unexpected. These issues were recorded in small quantities in the province, both in single finds and in hoards, and they played only a peripheral role in the local monetary circulation, where small change was regularly provided by Moesian and Thracian civic mints. But the Durostorum site stands out from this provincial monetary background at a specific period and through a particular category of coinage. An abnormally large amount of genuine Nicaean bronzes (51 pcs.) and their cast imitations (14 pcs.), featuring 'military' designs from Severus Alexander and Gordianus III, have been discovered in this Danubian site.

We consider it necessary to examine the accuracy of the numismatic data used first. Most of the issues with standards on the reverse (54 pcs., i.e. 83% of the total) were recorded in the Silistra area. Almost all of them originate from the private Pericle Papahagi Collection, which contains over 12,000 coins (about 2,100 of which are from the Principate era), discovered at Silistra. It is possible that some of them may have belonged to hoards that could not be properly identified and separated. The collection may also have been further altered when it was successively the property of several institutions in Romania (Dima 2023, 12, 293–297). Early Roman coins in the collection have been thoroughly studied by M. Dima, who tried to prove, with reliable arguments, that they represent single finds from the site of Durostorum. We are therefore confident that the Nicaean issues with standards on the reverse from the Pericle Papahagi Collection also have the same origin.

In addition, the discovery at Durostorum of a relatively large number of cast imitations after these particular issues could support the fact that genuine Nicaean bronzes with 'military' designs were available at this site, and that the population was quite familiar with them. We can only assume that these coins were brought from Moesia Superior during the third and fourth decades of the 2nd century AD, and that their arrival is somehow linked to the army stationed in Silistra, without being able to specify the exact means by which they reached this location. Under these circumstances, the discovery of a hoard of Nicaean bronzes in the vicinity of a site where these coins may have been used in daily transactions does not seem that unusual. If it was recovered in full, the small hoard may have represented the 'pocket money' of a person who lived in the hypothetical *villa rustica* near Ostrov and who was closely connected to the centre of Durostorum.

### Bibliography

Arbunescu, Al., 2017. Podoabe din aur din perioada romană târzie descoperite în zona comunei Ostrov, judeţul Constanţa. Cercetări Arheologice 24, 191–208.

Atanasov, G., 2007. Late Antique Tomb in Durostorum-Silistra and its Master. Pontica 40, 447–468.

Benea, D., 2006a. Dakien im Orientfeldzug des Severus Alexander. Die in Nicäa geprägten Münzen, in: Gaiu, C., Găzdac, C. (Eds.), Fontes Historiae. Studia in honorem Demetrii Protase. (Historica, 12). Editura Accent, Bistriţa - Cluj-Napoca, 693–698.

Benea, D., 2006b. L'Armée de la Dacie et la campagne de l'empereur Gordien III en Orient, in:

Mihailescu-Bîrliba, V., Hriban, C., Munteanu, L. (eds.), Miscellanea romano-barbarica. In honorem septagenarii magistri Ion Ioniţă oblata. (Honoraria, 2). Editura Academiei Române, București, 97–108.

Boțan, S.-P., Elefterescu, D., 2018. Vase de sticlă de epocă romană descoperite la Durostorum/ Ostrov-Ferma 4 (secolele I p.Chr. – IV p.Chr.). (Bibliotheca Archaeologica Moldaviae, 27). Editura Universității „Al. I. Cuza“ din Iași, Iași.

Butcher, K., 1995. The Coins, in: Poulter, A., Nicopolis ad Istrum: a Roman, Late Roman and Early Byzantine City, Excavation 1985–1992. (Journal of Roman Studies Monographs, 8). Society for the Promotion of Roman Studies, London, 269–314.

Calomino, D., 2019. Supplies for the Army: Bithynian Coins in the Balkans in the 3rd Century AD. Chiron 49, 131–160.

Chera-Mărgineanu, C., 1978. Un mormânt de epocă romană descoperit pe raza com. Ostrov. Pontica 11, 137–141.

Chirilă, E., Gudea, N., Stratan, I., 1974. Drei Münzhorte aus dem Banat 4. Jh. Beiträge zur Kontinuitätsfrage in Dazien. Muzeul de Istorie şi Etnografie Lugoj, Timișoara.

Ciołek, R., Dyczek, P., 2011. Novae: Legionary Fortress and Late Antique Town. 2. Coins from Sector IV. Center for Research on the Antiquity of Southeastern Europe, University of Warsaw, Warsaw.

Damian, P., Bâltâc, A., 2007. A Civil Roman Settlement at Ostrov-Durostorum. Istros 14, 61–70.

Dima, M., 2010. Monede romane descoperite la Ostrov, judeţul Constanţa, din colecţia Muzeului de Istorie Naţională şi Arheologie Constanţa (sec. I–III p.Chr.). Studii și Cercetări de Numismatică S.N. 1 (13), 35–68.

Dima, M., 2011. Contribuții privind circulația monetară în Dobrogea în prima jumătate a secolului al III-lea p.Chr. Studii și Cercetări de Numismatică S.N. 2 (14), 7–36.

Dima, M., 2023. Circulația monetară la Durostorum în secolele I-III. (Monografii, A.1). Editura Cetatea de Scaun, Târgoviște.

Dima, M., Elefterescu, D., 2009. Les monnaies de Durostorum – Ostrov (4e siècle av. J.-C. - 6e siècle ap. J.-C.). (Moneta, 86). Wetteren.

Dima, M., Talmațchi, G., 2002. Monede de bronz din tezaurul de la Canlia, com Lipnița, jud. Constanța, in: Nicolae, E. (ed.), Simpozion de numismatică organizat în memoria martirilor căzuți la Valea Albă, la împlinirea a 525 de ani (1476–2001). Chișinău 13–15 mai 2001. Comunicări, studii și note. Editura Enciclopedică, București, 63–78.

Draganov, D., Varbanov, V., 2021. Some Notes About One Unusual Coin Hoard, in: Varbanov, V., Rusev, N. (eds.), Coin Hoards in Southeastern Europe. (1st–6th century AD). (Proceedings of the Rousse Regional Museum of History, 24). Rousse, 425–433.

Dumitrescu, R. G., 2022. Un nou tezaur descoperit la Desa, jud. Dolj (sec. II–III p.Chr.), in: Talmațchi, G. M., Paraschiv-Talmațchi, C., Munteanu, L. (eds.), Studia Numismatica et Archaeologica in honorem Gabriel Gheorghe Custurea oblata. Editura Eikon, București / Pontica 55, Supplementum 9, 79–124.

Elefterescu, D., 2004–2005. Statuete votive din plumb de la Durostorum. Pontica 37, 221–238.

Elefterescu, D., 2017. Opaițe plastice descoperite la Durostorum-Ostrov (Ferma 4). Peuce S.N. 2 (15), 79–116.

Găzdac, C., 2010. Monetary Circulation in Dacia and the Provinces from the Lower Danube from Trajan to Constantine I (AD 106–337). (Coins from Roman Sites and Collections of Roman Coins from Romania, 7). Mega Publishing House, Cluj-Napoca.

Isvoranu, T., Dabîca, M., 2014. Coin Finds in the Southern Area of Histria. Materiale și Cercetări Arheologice S.N. 19, 157–171.

Mihailescu-Bîrliba, V., Chiriac, C., 2000. Descoperiri monetare în zona de sud-vest a Dobrogei, in: Iacob, M., Oberländer-Târnoveanu, E., Topoleanu, F. (eds.), Istro-Pontica. Muzeul tulcean la a 50-a aniversare, 1950–2000 / Omagiu lui Simion Gavril la 45 de ani de activitate, 1955–

2000. Institutul de Cercetări Eco-Muzeale, Tulcea, 441–453.

Mitrea, B., 1972. Découvertes de monnaies antiques et byzantines dans la République Socialiste de Roumanie. XV. Dacia N.S. 16, 359–374.

Munteanu, L., 2017. Moneda în așezările Daciei romane (Bibliotheca Classica Iassiensis, 15). Editura Universității „Al. I. Cuza" Iași, Iași.

Munteanu, M., Ocheșeanu, R., 1975. Descoperiri monetare în satele din Dobrogea romană (sec I–III e.n.). Pontica 8, 175–213.

Mușețeanu, C., Elefterescu, D., 1978. Oglinzi romane din plumb la Durostorum. Pontica 11, 105–111.

Mușețeanu, C., Elefterescu, D., 2004. Contribuţii privind ceramica romană de la Durostorum (IV). Peuce S.N. 2, 95–142.

Nuțu, G., Elefterescu, D., 2018. Fibulele de la Durostorum - Ostrov / The Brooches from Durostorum - Ostrov. Editura Universității „Al. I. Cuza" din Iași, Iași.

Oberländer-Târnoveanu, E., Oberländer-Târnoveanu, I., 2000. Quelques remarques sur la circulations des monnaies en bronze dans la zone des Bouches du Danube à l'époque romaine (Ier – IIIe siècles après J.-C.), in: Iacob, M., Oberländer-Târnoveanu, E., Topoleanu, F. (eds.), Istro-Pontica. Muzeul tulcean la a 50-a aniversare, 1950–2000 / Omagiu lui Simion Gavrila la 45 de ani de activitate, 1955–2000. Institutul de Cercetări Eco-Muzeale, Tulcea, 405–419.

Petac, E., 2011. Aspecte ale circulaţiei monetare în Dacia Romană (106–275 p.Chr.) / Aspects de la circulation monétaire en Dacie romaine (106–275 après J.-C.). (Moneta 115). Wetteren.

Poenaru Bordea, Gh., 1982. Monnaies, in: Suceveanu, Al., Histria. VI. Les thermes romains. (Histria, 6). Editura Academiei Republicii Socialiste România, Bucarest, 149–166.

Poenaru Bordea, Gh., 2000. Nicaea, in: Preda, C. (ed.), Enciclopedia arheologiei și istoriei vechi a României, III (M-Q). Editura Enciclopedică, București, 190–191.

Poenaru Bordea, Gh., Dima, M., 2007. Monnaies, in: Suceveanu, Al., Histria. XIII. La basilique épiscopale. Les résultats des fouilles. (Histria, 13). Editura Academiei, Bucarest, 153–193.

Poenaru Bordea, Gh., Ocheșeanu, R., Popescu, A., 1997. Monede grecești, romane și bizantine din colecția Muzeului din Brăila, descoperite în Dobrogea. Studii și Cercetări de Numismatică 12, 83–117.

Popescu, A., Iacob, M., 2016. Monede romane și bizantine timpurii descoperite la Noviodunum din colecția Muzeului de Istorie și Arheologie Tulcea. Editura Academos Edit, Iași.

Preda, C., Nubar, H., 1973. Histria. III. Descoperirile monetare 1914 – 1970. (Histria, 3). Editura Academiei Republicii Socialiste România, București.

Schultz, S., 1978. Streufunde aus Isaccea (Noviodunum). Pontica 11, 97–104.

Tacchella, D., 1893. Description de Monnaies Grecques de l'époque impériale trouvées en Bulgarie. RN 11, 51–77.

Vertan, A., 2002. Circulația monetară în Dobrogea romană (secolele I – III). (Pontus Euxinus, 2). Editura Nereamia Napocae, Cluj-Napoca.

Vojvoda, M., 2023. Reverse Motifs with Military Insignia of Nicaea Coinage Finds from the Territory of Present-Day Serbia, in: Callegher, B., Carraro, G. (eds.), Fundmünzen & Co. 30 years of Ancient Coin Finds (VI c. BCE – VIII c. CE). Trieste, April 22nd–23rd, 2022. (Polymnia. Numismatica antica e medievale. Studi, 17). Edizioni Università di Trieste, Trieste, 103–120.

Vojvoda, M., Crnobrnja, A. N., 2018. Circulation of the Coins of Bithinian Mint of Nicaea in Moesia Superior, in: Ivanišević, V., Borić-Brešković, B., Vojvoda, V. (eds.), Proceedings of the International Numismatic Symposium „Circulation of Antique Coins in Southeastern Europe", Viminacium, Serbia, September 15th–17th 2017. Institute of Archaeology Belgrade, Belgrade, 131–141.

Vojvoda, M., Golubović, S. Redžić, S., 2021. Coin Finds from the Eastern Viminacium Necropolis

- the Site Kod koraba. Archaeology and Science 17, 53–81.

Weiser, W., 1983. Katalog der Bithynischen Münzen der Sammlung des Instituts für Altertumskunde der Universität zu Köln. 1. Nikaia. Mit einer Untersuchung der Prägesysteme und Gegenstempel. (Papyrologica Coloniensia, 11/1). Westdeutscher Verlag, Opladen.

Војвода, М., 2011. Реверсне представе са војним ознакама на новцу ковнице у Никеји на основу узорка са виминацијумске некрополе Више гробаља, Гласник српског археолошког друштва 25 (2009), 243–256.

Војвода, М., 2013. Новац битинијске ковнице Никеје са виминацијумске некрополе Више гробаља, Нумизматичар 31, 155–196.

Војвода, М., Петровић, С., 2011. Новац битинијске ковнице Никеје из Бановог Поља у Мачви, Нумизматичар 29, 283–307.

Војвода, М., Бранковић, Т., 2016. Новац битинијске ковнице Никеје из римске нумизматичке збирке Народног музеја у Пожаревцу. Нумизматичар 34, 103–142.

Црнобрња, А., Васић Дериманović, Ј., 2017. Нови налази новца битинијске ковнице Никеје на територији града Београда, Нумизматичар 35, 33–61.

Црнобрња, Н., 1981. Новац града Никеје у нумизматичкој збирци Музеја градаБеограда, Годишњак града Београда 28, 5–23.

Божкова, Б., 1986. Антични монети от разкопките в Рациария. Нумизматика 20/1, 41-48.

Драгоев, Д. 2012. Находка от провинциални бронзови монети от фонда на РИМ-Русе, in: Торбатов, С., Русев, Н., Събев, П. (eds.), VI Национална Научна Конференция. Попово - Минало и Бъдеще. 19-20 октомври 2009 г. Част I. Доклади от секция „Археология и стара история“. Велико Търново, 181–214.

Иванов, Р., Атанасов, Г., Доневски, П., 2006. История на Силистра. Т. 1. Античният Дуросторум. София-Силистра.

Гущераклиев, Р., 1993. Колективна монетна находка - село Малиново, Ловешко. Известия на Исторически музей - Кюстендил, 361–367.

Михельбертас, М. М., 1968. Два клада римских провинциальных монет из Западной Литвы. Нумизматика и эпиграфика 7, 68–71.

Михельбертас, М. М., 2010. Дополнительные сведения о кладе римских монет из Даргелишке (р-н Тельшяй, Литва), in: Filipow, K., Kuklik, B. (eds.), Pieniądz, symbol, władza, wojna - wspólne dziedzictwo Europy: studia i materiały: Białoruś, Estonia, Litwa, Łotwa, Polska, Rosja, Rumunia, Słowacja, Ukraina. Polskie Towarzystwo Numizmatyczne, Augustów - Warszawa, 53–59.

CHRE - Coin Hoards of the Roman Empire - https://chre.ashmus.ox.ac.uk/

RPC - Roman Provincial Coinage (online) - https://rpc.ashmus.ox.ac.uk/

# Changing Content

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**Abstract:** In recent years, the digital registration of the Teylers Museum's numismatic collection has been seriously overhauled. A lot of information has been added to the objects, and most of the collection has been subjected to a metal analysis. This text focuses on the added value, as a first step to make the data FAIR.

**Keywords:** Registration; Metal analysis; Coins medals; FAIR data; Counterfeits.

## Introduction

As a curator, I am responsible for two numismatic collections in the Netherlands. The first is that of the Teylers Museum in Haarlem and the second of the Rijksmuseum in Amsterdam. In total, I work with more than 40,000 objects, of which a small group is Roman and Byzantine. In recent years, digital registration in the Teylers Museum has undergone a major overhaul. A lot of information has been added to the objects as a first step to make the data FAIR (findable, accessible, interoperable and reusable). Most of the collection has also been subjected to metal analysis. This text demonstrates the added value of these exercises.

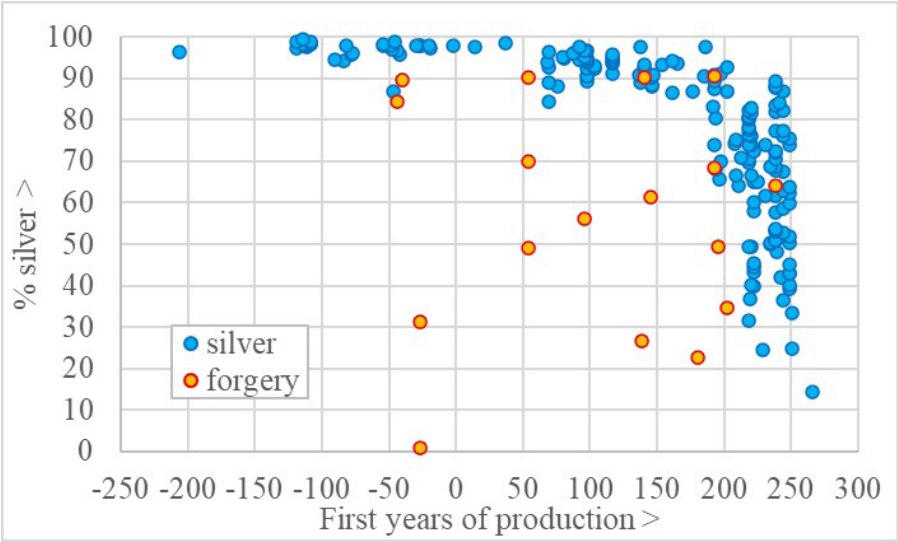
## Focus

The majority of both collections were described in the 19th Century. These 19th-century descriptions formed the starting point for the digital collection registrations around the year 2000. In the nearly 150 years since the original descriptions were made, much new research has been published, but little or no information has been added to these databases. This may be 'charming' to people researching the history of museums, but it is not very useful for numismatic research. In the past couple of years, improvements have been made to the descriptions. The 19th-century inventory cards — with the original descriptions — were also digitised. Furthermore, a parallel database is being created with the names of the people and institutions involved. To date, over 7,500 names have been collected.

In this text, I focus on the Roman and Byzantine coins. The original status quo of the descriptions is that the coins in the Teylers Museum are described with the publications of Cohen (1880)

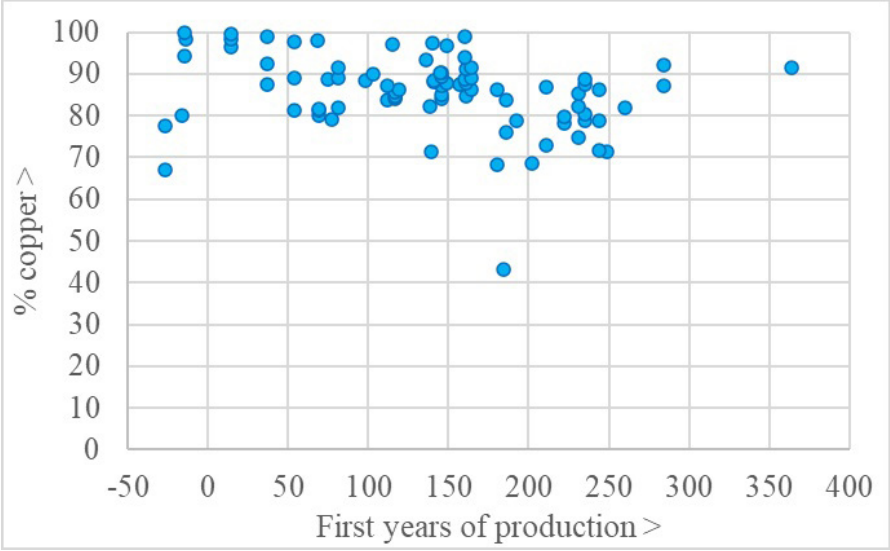
and Sabatier (1862), and that those of the Rijksmuseum are only described roughly and without literature, like 'a "middle bronze" coin from Emperor August.' The Teylers Museum has two old collections dating back to the 18th century. The first is from the museum's founder, Pieter Teyler van der Hulst (1702–1778), with 59 coins (18 Republic, 41 Empire). The second is from the Haarlem printer Johannes Enschedé (1750–1799), with 569 coins (7 Republic, 310 Empire, 21 Eastern Empire, and 231 Byzantine). In addition, the museum has 192 coins (4 Republic, 177 Empire, 2 Eastern Empire and 9 Byzantine) in its collection, so a total of 820 coins from these periods. The Rijksmuseum has a much smaller collection — brought together in the 19th century by the Royal Society of Antiquities — with 18 coins (2 Republic, 13 Empire, 3 Byzantine).

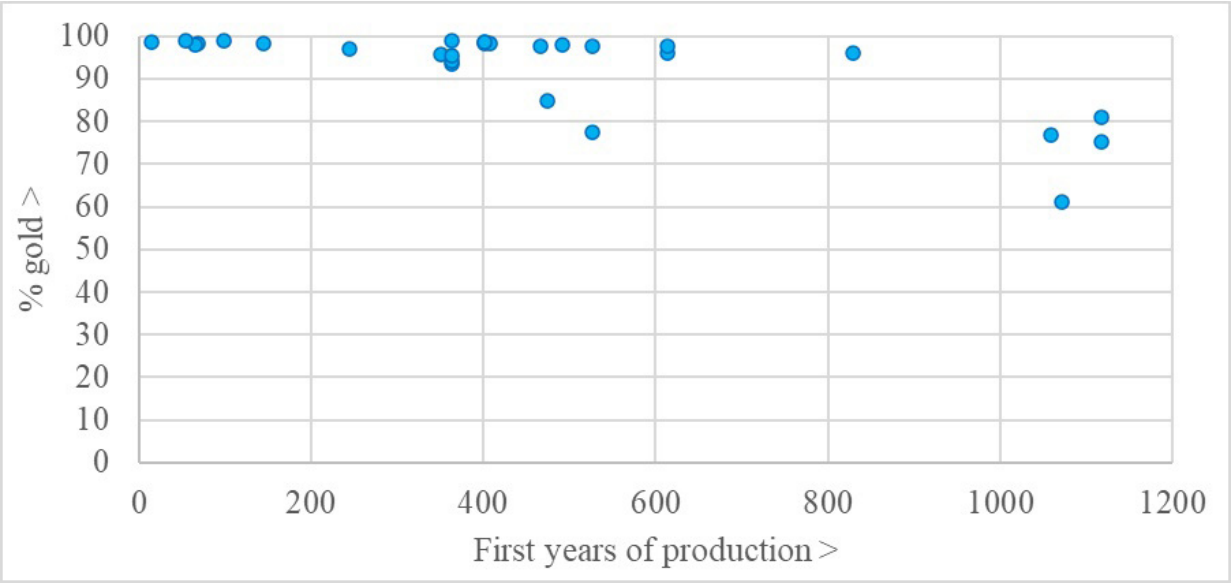
The fact that the coins come from 'old' collections does not mean that they are genuine. Several counterfeits have been discovered. To support the research, the metal content of 300 out of the 820 coins in the Teylers Museum was examined: 28 gold, 187 silver, and 85 copper and copper-based coins. The most important data is given in **Graphs 1–3**.



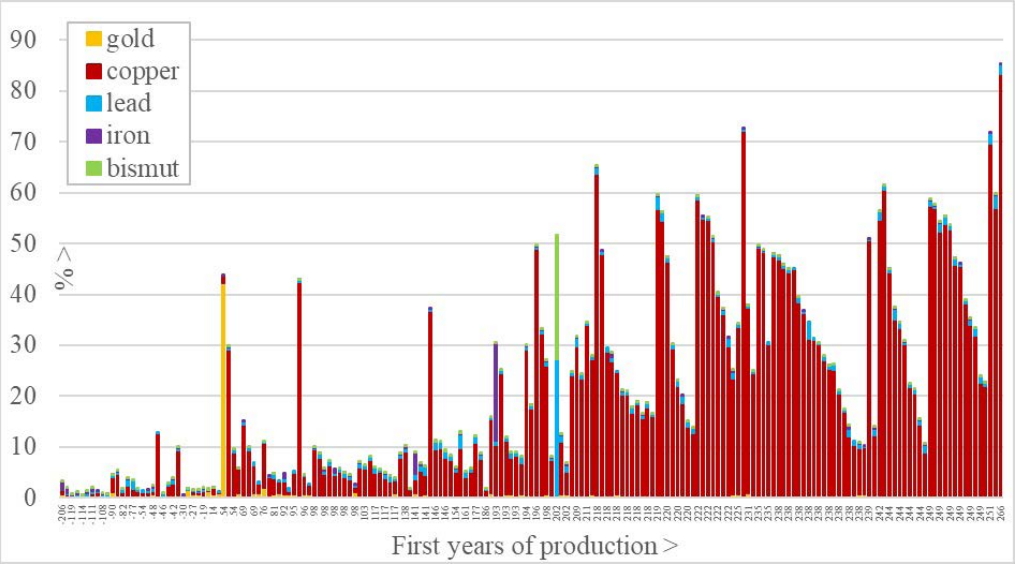

**Graph 1.** Gold (Au) content in gold coins.

**Graph 2.** Silver (Ag) content in denarii & antoniniani.






**Graph 3.** Copper (Cu) content in coins of copper, brass, billion, and orichalcum.




**Graph 4.** Non-silver elements in silver coinsi.

## Data

I am very happy with the data collected, but it also multiplies my problem, as that data is only useful if the objects have proper descriptions and, of course, the separation between real coins and counterfeits. **Graphs 1, 2,** and **3** show several deviations — coins with a primary metal content that is lower than expected. This is especially the case with the silver denarii and antoniniani. Of the gold coins (**Graph 1**), the piece with the lowest amount of gold (61%) is a histamenon (**Fig. 1**) from the Byzantine Empire, minted during the reign of Emperor Michael VII (1071–1078). This piece looks real. Graph 2 shows the silver coins. In the past, some easily recognisable forgeries were already identified, like Figure 3, with a genuine coin depicted in **Fig. 2**. This amount is growing thanks to metallurgical research. Up to now, 16 counterfeits have been discovered, several of which are depicted in this text (**Fig. 3–12**). In Graph 2, most of these coins are related to the dots in the period of 50 BCE–200 CE, with a silver content of less than 80%. Graph 3, with 'copper' coins, shows one object that appears genuine, even though it contains 49% lead (**Fig. 13**).

The added elements in silver coins change over time, as can be seen in Graph 4. This mainly concerns a growing amount of copper, as would be expected with debasement. The oldest phase, up to about 54 CE, shows coins with a high silver content. And at the end of the 2nd century, the period of inflation and the introduction of the antoniniani is clearly visible. Because the coins were sorted by silver content per year, Graph 4 shows a sawtooth-shape as soon as more coins were measured in one year.

Two remarkable coins — one from the year 54 and one from 202 — show a completely different metal content. The first (**Fig. 5**) is a forgery with 42% gold. It shows an old layer of gilding. Someone may have tried to 'upgrade' this denarius to a gold aureus. Maybe the technique of fire-gilding is used, as a significant amount of mercury has been detected. The second coin with a remarkably low silver content is a denarius from Plautilla (**Fig. 12**). Given the uneven surface and the uneven rim with a possible residue of the casting technique under the portrait, this specimen should also be considered a forgery. Four other denarii stand out: one of Faustina I, one of Septimius Severus, and two of the Roman Republic. The first two have a significantly higher iron content (**Fig. 9** and **11**), while the last two (**Fig. 4** and **14**) contain approximately 10% copper. Of these four, the Caesar denarius (Figure 14) is likely to be genuine. This shows that a variation in metal content provides a clue but is not always the key factor in labelling a coin as a forgery.

## To conclude

In the coming period, the databases will be further enhanced, and the issue of later copies will be tackled more thoroughly. Several steps are needed to make the coins of both museums FAIR. The Teylers Museum is working on a new website where objects are given persistent identifiers. This step has already been taken at the Rijksmuseum, but the object descriptions are still too rudimentary. With additional provenance research, maybe some objects can be linked to coin finds and old collections. Once the data is standardised and cleaned, the coins are ready to be linked to the Nomisma standards and to other datasets, such as OCRE. With only 820 coins, this is a small step for the numismatic community, but a big step for both museums, as it can be used as a blueprint to connect other parts of the numismatic collections in the near future.

**Fig. 1.** Byzantine Empire, Michael VII (1071–1078), histamenon. Gold, 29 mm, 4.3017 grams, 61.04% gold, 34.27% silver, 3.98% copper, 0.71% remainder (inv. TMNK 09862).

**Fig. 2.** Roman Empire, August (27 BCE – 14 CE), denarius. 18 BCE, silver, 20 mm, 3.8266 grams, 0.61% gold, 97.95% silver, 0.60% copper, 0.84% remainder (inv. TMNK 12846).

**Fig. 3.** Roman Empire, August (27 BCE – 14 CE), denarius. 18 BCE, silver, 17 mm, 3.1917 grams, surface: 94.02% silver, 4.61% copper, core: 31.25% silver, 67.17% copper (inv. TMNK 09301).

**Fig. 4.** Roman Republic, Octavian, travelling mint, denarius. 40 BCE, silver, 18 mm, 3.2836 grams, 0.37% gold, 89.59% silver, 8.96% copper, 0.48% lead, 0.60% remainder (inv. TMNK 09310).

**Fig. 5.** BRoman Empire, Nero (54–68 CE), denarius. 60–61 CE, gilded silver, 17 mm, 3.0487 grams, 42.21% gold, 49.17% silver, 1.48% copper, 5.95% mercury, 1.19% remainder (inv. TMNK 09326).

**Fig. 6.** Roman Empire, Nero (54–68 CE), denarius. 65–66 CE, silver plated copper, 18 mm, 2.3188 grams, core: 0.00% gold, 69.95% silver, 29.17% copper, 0.24% iron, 0.13% tungsten, 0.51% remainder (inv. TMNK 09329).

**Fig. 7.** Roman Empire, Nerva (96–98 CE), denarius. 97 CE, silver, 17 mm, 3.4536 grams, 0.00% gold, 56.25% silver, 42.36% copper, 0.48% lead, 0.12% tin, 0.07% iron, 0.47% tungsten, 0.25% remainder (inv. TMNK 09357).

**Fig. 8.** Roman Empire, Antoninus Pius (138–161 CE), denarius. 139 CE, silver plated copper, 17 mm, 2.2432 grams, 0.43 gold, 26.78 silver, 71.27 copper, 0.47% lead, 0.71% tin, 0.14 antimony, 0.91 remainder (inv. TMNK 09394).

**Fig. 9.** Roman Empire, Faustina I (141–161 CE), denarius. 141–161 CE, silver, 17 mm, 3.0067 grams, 0.90% gold, 90.17% silver, 2.75% copper, 0.96% lead, 4.21% iron, 0.37% tin, 0.64% remainder (inv. TMNK 09400).

**Fig. 10.** Roman Empire, Marcus Aurelius (161–180 CE), denarius [hybrid]. 180 CE, silver, 18 mm, 2.5356 grams, 0.00% gold, 22.82% silver, 68.19% copper, 6.13% lead, 0.63 iron, 1.44% tin, 0.79% remainder (inv. TMNK 09407).

**Fig. 11.** Roman Empire, Septimius Severus (193–211 CE), denarius. 193–211 CE, silver, 17 mm, 2.6377 grams, 0.47% gold, 68.57% silver, 9.82% copper, 0.99% lead, 19.23% iron, 0.56% tin, 0.36% remainder (inv. TMNK 09444).

**Fig. 12.** Roman Empire, Plautilla (202–211 CE), denarius. 202–211 CE, silver, 18 mm, 4.4198 grams, 0.00% gold, 34.63% silver, 0.12% copper, 13.13% tin, 27.16% lead, 24.52% bismuth, 0.44% remainder (inv. TMNK 09455).

**Fig. 13.** Roman Empire, Commodus (161–192 CE), sestertius. 186–189 CE, copper, 32 mm, 25.6669 grams, 43.20% copper, 49.31% lead, 5.34% tin, 1.53% iron, 0.62% remainder (inv. TMNK 09431).

**Fig. 14.** Roman Republic, Julius Caesar (unknown mint, Africa), denarius. 47–46 BCE, 18 mm, 3.9081 grams, 0.00% gold, 86.89% silver, 12.62% copper, 0.28% tin, 0.21% remainder (inv. TMNK 11947).

**Bibliography**

Cohen, Henry, 1880. Description Historique des Monnaies frappées sous l'empire romain. Paris.
Sabatier, J., 1862. Description générale des monnaies byzantines 1 & 2. Paris/London.

# New finds of Thracian and Lower Moesian Mints from Viminacium

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**Abstract:*** Under Antoninus Pius, an increased influx of coins from the Thracian and Lower Moesian mints in the territory of Moesia Superior can be observed. Two other peaks coincide with the reigns of Septimius Severus and Caracalla. Among the Thracian cities, the coins of Pautalia prevail, followed by Hadrianopolis, Philippopolis, and Perinthus, while the share of other mints (Anchialus, Serdica, Deultum, Byzantium, Augusta Traiana, Mesambria, and Plotinopolis) is considerably smaller. Coins from the Lower Moesian mints are represented in far lower numbers than coins from the Thracian mints. The largest number comes from the Nicopolis ad Istrum mint, while Marcianopolis and Tomis are represented with one specimen each. The mapping of Thracian coins found in the territory of Moesia Superior shows their largest concentration in Viminacium and its surroundings. So far, 68 coins of the Thracian (52) and Lower Moesian (16) mints have been found during archaeological excavations at Viminacium.

**Keywords:** Roman provincial coins, Thracia, Lower Moesia, Viminacium.

BulgNJ

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During Roman times, Viminacium developed into the largest civilian settlement in Upper Moesia, but it also became an important military centre in which the legion VII Claudia was stationed (*Legio* VII *Claudia Pia Fidelis*). Most likely at the beginning of Hadrian's rule (the year 117), Viminacium gained the status of a municipium – Municipium *Aelium Viminacium*. In the middle of the 2nd century, but possibly even earlier, it became the governor's seat of the province of Upper Moesia. During the reign of Septimius Severus and his heirs, it reached the pinnacle of its development. At the beginning of the reign of Emperor Gordian III (the year 239), it received the status of a *colonia* (colony) – *Colonia Viminacium* (Mirković 1968, 63–69). Several factors led to the economic and political rise of Viminacium: its hinterland rich in south and fertile fields; its convenient geographic position within the empire's defence system; the crossroads of important land roads that connected the northern part of the Balkan peninsula with the east, west and south; as well as the fluvial route along the Danube. Although all those communications basically served military purposes, intensive trading activities were very quickly developed, leading merchants from both the neighbouring and distant provinces, and even from all over the empire into Viminacium (Mirković 1968, 56). In October 239, simultaneously with receiving its status of a colonia, Viminacium also gained the right to mint coins. The mint was active until the period of the common reign of Valerianus I and Gallienus (254/255). Slightly later, most likely during the reign of Philippus I (244–249), the secondary imperial mint in Viminacium started working. It was especially developed during the reign of Trajan Decius (249–251) and also operated until the period of the common reign of Valerianus I and Gallienus (257) (Борић-Брешковић 1976, 8–23).

The earliest archaeological excavations of Viminacium were conducted in 1882. However, only the protective excavations initiated in the 1970s, which continue to the present day, put Viminacium in the spotlight of worldwide scientific interest. Over this period of time, the largest part of the southern and the eastern cemeteries have been examined, with about 15,000 graves, as well as fifteen *villae rusticae* in the city's closest vicinity, two aqueduct branches with a total length of 1,500 metres, the amphitheatre, the city baths, the northern and the western legionary camp gates, and various structures within the camp itself (Vojvoda, Anđelković Grašar 2022, 12–13). During the archaeological research mentioned above, a total of about 15,000 coins have been discovered in all of the listed locations as well.[1] Studying this huge sample of coinage that comes from closed archaeological contexts represents an extraordinary contribution to the study of the Roman imperial and provincial mints' monetary circulation in this part of the empire. In this respect, our attention is especially drawn to the appearance of provincial issues minted in mints of the neighbouring, but also in distant eastern provinces. Among the Viminacium coinage finds, this phenomenon can be noted from the 1st century, becoming more frequent during the 2nd century and reaching its peak during the first half of the 3rd century.

The analysis of monetary finds clearly indicates that, especially at the end of the 2nd and the beginning of the 3rd centuries there was a lack of bronze coinage from the senatorial issues in the monetary circulation of the Balkan provinces. This was also the main reason for establishing the provincial mint in Viminacium in the year 239, but somewhat later also in Dacia, in the year 246. Besides Moesia Superior and Dacia, the shortage of small bronze denominations was particularly evident in both Pannonias. This shortage was covered by *limesfalsa* coinage, particularly from Septimius Severus' reign to the start of the reign of Gordian III. The end of limesfalsa coin production can be connected with the founding of the Viminacium mint, which began supplying the Pannonias with bronze coins (Vojvoda, Crnobrnja 2018, 133). At that time, numerous provincial mints were in operation in Moesia Inferior and Thrace, which obviously covered the needs of

[1] Half of these finds have been published so far and numerous studies based on them have been written: Војвода 2011, 243–256; Војвода 2013, 155–196; Vojvoda, Mrđić 2015; Vojvoda 2015, 53–78;Vojvoda 2017a, 51–74; Vojvoda 2017b, 131–150; Vojvoda, Mrđić 2017; Borić-Brešković, Vojvoda 2017, 7–31; Vojvoda 2018, 65–87; Borić-Brešković, Vojvoda 2018, 73–100; Борић-Брешковић, Војвода 2018, 19–50; Vojvoda, Redžić 2018, 50–55, 239–281; Војвода, Реџић 2018, 51–71; Vojvoda 2019, 71–75; Vojvoda, Redžić 2019, 79–98; Војвода, Реџић 2019, 261–267; Vojvoda, Mikić 2020, 119–126; Vojvoda, Redžić 2020a, 217–231; Vojvoda, Redžić 2020b, 113–117; Vojvoda, Golubović, Redžić 2021, 53–81; Vojvoda, Mikić 2023, 18–29.

their provinces for small bronze coins. There was also a moderate circulation of their coins in the territory of Moesia Superior until the reign of Gordian III (**Fig. 1**).

**Fig. 1.** Supplying Moesia Superior with provincial coinage at the beginning of the 3rd century AD.

Analyses of monetary finds from the territory of Moesia Superior ending with the reign of Commodus indicate that, when compared to the quantity of coins from Thracian and Lower Moesian mints, provincial bronze coinage from mints in Asia Minor was much less frequently represented. During the reign of Septimius Severus, his sons, and, later on, Elagabalus, the situation changed. During that period, the presence of provincial bronze coinage more than doubled. Most of the issues came from Macedonian mints, especially from Stobi. Further on, the presence of coinage from the Bithynian mint of Nicaea gradually increased as well, reaching its peak during the reign of Severus Alexander. A similar situation also continued during the first year of the reign of Gordian III. Establishing a mint in Viminacium and the beginning of monetary circulation of its coinage immediately produced a reduction in the quantity of Gordian III coins from the Nicaea mint. The analysis of numismatic finds from the territory of present-day Serbia showed that in the period from Philip I to Valerianus I and Gallienus, most of the provincial issues were struck by the Viminacium mint (**Fig. 2**).

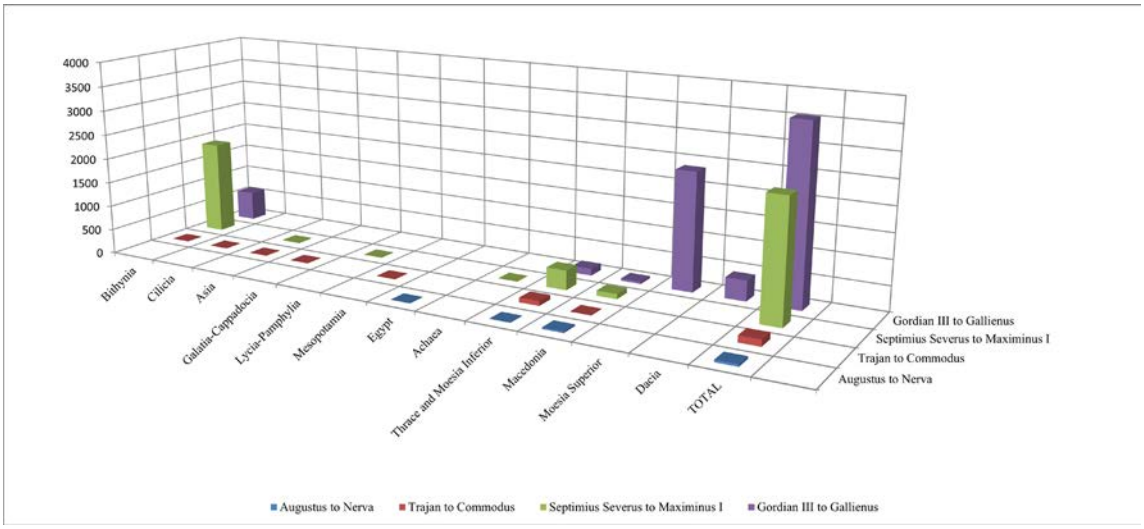


**Fig. 2.** Presence of provincial coinage in Moesia Superior.

The second interesting fact is related to Macedonian mints, partially also supplying Moesia Superior with coinage during the first two centuries. During Caracalla's reign, exactly during the time when Nicaean coinage played a larger part in the monetary circulation of Moesia, the Stobi mint was closed. Almost at the same time in Macedonia, during the reign of Elagabalus and especially that of Severus Alexander and Gordian III, significant issues of autonomous coinage (Koinon Macedoniae) were minted. Obviously, contrary to the coinage from Nicaea, they did not have much influence on the monetary circulation in the territory of Moesia. As can be seen, the representation of Thracian and Lower Moesian mints followed that of Macedonian ones in the period until the opening of the provincial mint in Viminacium in AD 239 (**Fig. 3**).

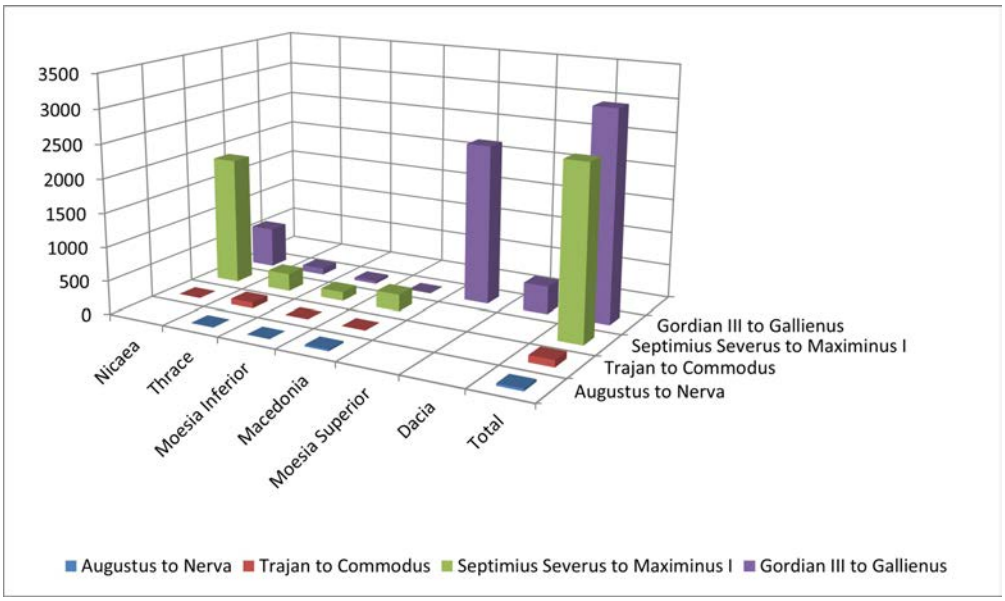


**Fig. 3.** Presence of provincial coinage from the Balkan mints and the Nicaea mint in Moesia Superior.

We now return to the monetary finds from the Moesian and Thracian mints discovered in Viminacium. The total of 37 coins from the Thracian mints and eight coins from the Lower Moesia mints were published earlier (Vojvoda 2011, 139–152, Table 1–2; Vojvoda, Tapavički-Ilić 2018, 129–143, Table 1; Vojvoda, Crnobrnja in print),[2] and on this occasion, we are presenting the newly discovered 23 coins from the recent archaeological research. Among them, 15 pieces originate from the Thracian mints and eight pieces from the mints located in Lower Moesia.[3] So far, a total of 68 coins have been registered in Viminacium, among them 52 originating from Thracian mints and 16 from those located in Lower Moesia. A total of eleven Thracian and three Lower Moesian mints are represented. Coins from the mints in Pautalia, Hadrianopolis, Philippopolis, and Serdica are represented most frequently. Among the three mints from Lower Moesia, the most frequent are coins from the Nicopolis ad Istrum, followed by those from the Marcianopolis mint (**Fig. 4**).

[2] At the 3rd International Roman and Late Antique Thrace (RaLATh) Conference 'Roads, Communication & Mobility', held between 18th–21st October, 2018, in Komotini, Greece, Vojvoda and Crnobrnja gave a presentation entitled: 'Coins from Thracian Mints on the Territory of Present-Day Serbia'. In 2019, the authors mentioned above submitted a paper with the same title for the conference proceedings (Vojvoda, Crnobrnja in print). Some of the data was mentioned in it (Figs. 2–3), and they are repeated here with minimal additional information (Figs. 2–3). Since the printing of the proceedings is currently unlikely, on this occasion we found it necessary to present the graphs mentioned earlier, in order to enable a better insight into the presence of coins from the provincial mints in Moesia Superior and, consequently, to follow the topic we are currently working on.

[3] Some of them were published only within the exhibition catalogue: Roman Limes and Cities in the Territory of Serbia, in 2018 (Vojvoda, Redžić 2018, 50–55; 239–281), but not as a separate study connected to coinage from the Thracian and Lower Moesian mints.

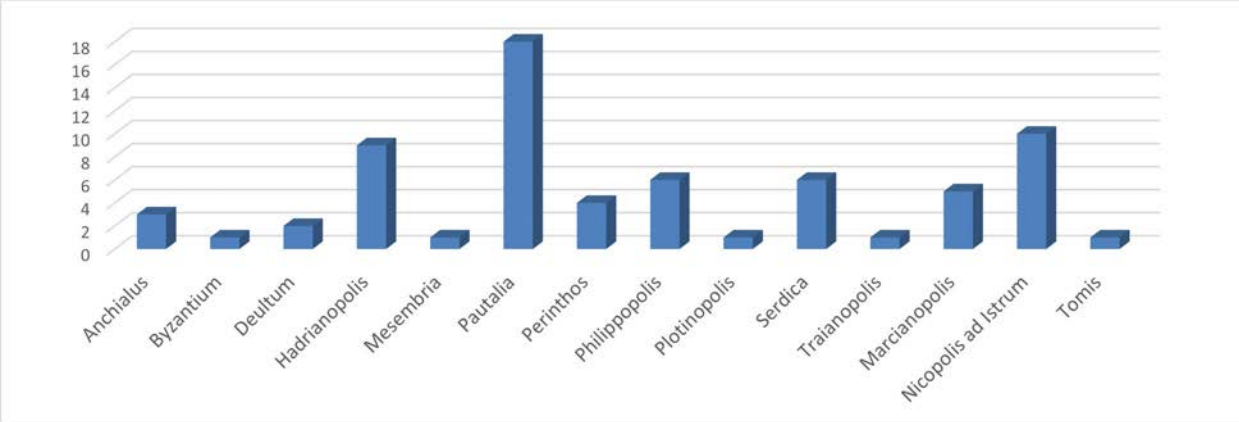


**Fig. 4.** Presence of Thracian and Lower Moesian mints at Viminacium.

The following detailed descriptions refer to the new coin finds of Thracian and Lower Moesian mints in Viminacium:[4]

**Thrace**:

1. Mint of Anchialus, Gordian III, AD 241–244

**Obv.** AVT K M ANT ΓORΔIANOC AVΓ (around) // CEB TPAN // KVΛΛINA (in two rows). Confronted busts of Gordian III, draped and cuirassed right, head laureate, and of Tranquillina draped bust, head diademed, left.

**Rev.** [OV]ΛΠIANWN – AΓXIAΛEIN (NWN in ligature). Athena standing facing, head left, holding patera and inverted spear; at feet, shield.

Weight: 15.04 g; diameter: 28.15 mm; Viminacium, Thermae, Room 2

CN coin 55273, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55273

CN type 4792, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/4792

(accessed 4 January 2024)

RPC VII.2, no. 1139: https://rpc.ashmus.ox.ac.uk/coins/7.2/1139 (accessed 27 October 2023)

Viminacium Museum inv. 04_79; Field Inventory C-144

Published: Vojvoda, Redžić 2018, 270–271, Cat. no. 71; Vojvoda, Redžić 2019, 95, Cat. no. 152; Vojvoda, Redžić 2024, 347, Cat. no. 271.

[4] We would like to extend our deepest gratitude to Dr. Ulrike Peter for her help in identifying the coins.

2. Mint of Deultum, Macrianus, AD 217–218
**Obv.** IMP C M OPEL SEV MA[CRINVS AV]. Bust cuirassed, head radiate, right.
**Rev.** COL FL PA–C DEVLT. Nude Aphrodite standing facing, covering her breasts with right hand and pudenda with left hand.

Weight: 7.01 g; diameter: 24.23 mm; Viminacium, Thermae, Room 5
CN coin 55274, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55274
CN type 7695, in Corpus Nummorum https://www.corpus-nummorum.eu/coins/7695
(accessed 4 January 2024)
Viminacium Museum inv. 04_345; Field Inventory C-293
Published: Vojvoda, Redžić 2019, 85, Cat. 10; Vojvoda, Redžić 2024, 346, Cat. no. 270.

3. Mint of Hadrianopolis, Gordian III, AD 238–244
**Obv.** AVT K M ANT ΓΟΡΔΙΑΝΟC AVΓ (VΓ in ligature). Bust draped, cuirassed right, head laureate.
**Rev.** ΑΔΡΙΑΝΟΠΟΛΕΙΤΩΝ.City gate with one door, flanked by two towers.

Weight: 11.17 g; diameter: 27.17 mm; Viminacium, Više Grobalja, Grave G-2482
CN coin 55275, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55275
CN type 6637, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/6637
(accessed 4 January 2024)
RPC VII.2, no. 695: https://rpc.ashmus.ox.ac.uk/coins/7.2/695 (accessed 27 October 2023)
Viminacium Museum inv. 04_234; Field Inventory C-13592
Published: Vojvoda, Redžić 2024, 344, Cat. no. 268.

4. Mint of Hadrianopolis, Gordian III, AD 238–244
**Obv.** AVT K M ANT – ΓΟΡΔΙΑΝΟC AVΓ (VΓ in ligature). Bust draped, cuirassed, right, head laureate.
**Rev.** ΑΔΡΙΑΝ–Ο–ΠΟ–ΛΕΙΤΩΝ. Serapis standing left, wearing kalathos, raising right arm, holding long sceptre in left hand.

Weight: 10.50 g; diameter: 28.45 mm; Viminacium, Pećine, Grave G-5937
CN coin 55276, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55276
CN type 6574, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/6574 (accessed 4 January 2024)
RPC VII.2, no. 737: https://rpc.ashmus.ox.ac.uk/coins/7.2/737 (accessed 27 October 2023)
Viminacium Museum inv. 04_241; Field Inventory C-14248
Published: Vojvoda, Redžić 2024, 343, Cat. no. 267.

5. Mint of Hadrianopolis, Gordian III, AD 238–244
**Obv.** AVT K M ANT Γ–ORΔIANOC [AVΓ]. Bust draped, cuirassed, head laureate, right.
**Rev.** AΔPIANOΠ–OΛEITΩN. Nemesis standing left, holding cubit rule and reins; at her feet, wheel.

Weight: 10.08 g; diameter: 27.41 mm; Viminacium, Burdelj, Grave G-31
CN coin 55277, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55277
CN type 6641, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/6641 (accessed 4 January 2024)
RPC VII.2, no. 724: https://rpc.ashmus.ox.ac.uk/coins/7.2/724 (accessed 27 October 2023)
Viminacium Museum inv. 04_255; Field Inventory C-161
Published: Vojvoda, Redžić 2024, 345, Cat. no. 269.

6. Mint of Pautalia, Septimius Severus, AD 195–198
**Obv.** AVT K Λ CEΠT – CEVHPOC Π. Bust draped, cuirassed, right, head laureate.
**Rev.** HΓE • CTA • BAPBAPOY // ΠAVTAΛIAC. Emperor on horseback galloping right, brandishing spear to lion.

Weight: 13.62 g; diameter: 33.25 mm; Viminacium, Pirivoj, Grave G-199
CN coin 51481, in Corpus Nummorum: https://www.corpus-nummorum.eu/coins/51481
CN type 21112, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/21112 (accessed 4 January 2024)
Viminacium Museum inv. 04_77; Field Inventory C-583
Published: Vojvoda, Redžić 2018, 269–270, Cat. no. 69; Vojvoda, Redžić 2024, 333, Cat. no. 257.

7. Mint of Pautalia, Caracalla, AD 203

**Obv.** AVT [M AV]PH – ANTΩNEINOC. Bust, draped, cuirassed right, head radiate.

**Rev.** OVΛΠIAC – ΠAVTAΛIAC. Serpent with fishtail coiling, bent four times, radiate head right.

Weight: 9.22 g; diameter: 29.68 mm; Viminacium, Thermae, Room 1

CN coin 55278, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55278

CN type 21264, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/21264 (accessed 4 January 2024)

Viminacium Museum inv. 04_229; Field Inventory C-170

Published: Vojvoda, Redžić 2018, 270, Cat. no. 70; Vojvoda Redžić 2019, 95, Cat. no. 151; Vojvoda, Redžić 2024, 334, Cat. no. 258.

8. Mint of Pautalia, Caracalla, AD 212–217

**Obv.** AVT K M AVP CEV – ANTΩNEINOC. Bust draped, cuirassed, right, head laureate.

**Rev.** OVΛΠIAC – ΠAV[TAΛI]AC. Nude Heracles standing right, resting right hand on club, lion skin over left arm, holding bow in left arm.

Weight: 16.03 g; diameter: 30.06 mm; Viminacium, Pirivoj, Trench 54

CN coin 55300, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55300

CN type 21704, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/21704 (accessed 4 January 2024)

Viminacium Museum inv. 04_252; Field Inventory C-1560

Published: Vojvoda, Redžić 2024, 335, Cat. no. 259.

9. Mint of Pautalia, Caracalla, AD 212–217

**Obv.** AVT K M AVP CEV – ANTΩNEINOC. Bust draped, cuirassed, head laureate, right.

**Rev.** OVΛΠIAC – [ΠAVTAΛIAC]. Nude Hermes standing facing, head left, holding purse in right hand, caduceus in left arm.

Viminacium, Na Kamenju, Square D/8; Weight: 16.66 g; diameter: 29.20 mm
CN coin 55279, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55279
CN type 21693, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/21693 (accessed 4 January 2024)
Viminacium Museum inv. 04_257; Field Inventory C-85
Published: Vojvoda, Redžić 2024, 336, Cat. no. 260.

10. Mint of Philippopolis, Domitian, AD 88–89
**Obv.** [IMP] CAES DOMIT AVG GERM – COS XIIII CENS [PER P P]. Head laureate, right.
**Rev.** ΦΙΛΙΠΠΟ–ΠΟΛ[ΕΙΤΩΝ]. River god and city goddess; to left, river god reclining right, holding reed and resting on water-urn; behind him, reed; to right, city goddess standing left, wearing kalathos, holding patera and ears of corn.

Weight: 18.60 g; diameter: 24.10 mm; Viminacium, Nad Klepečkom, Trench 56
CN coin 55280, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55280
CN type 7527, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/7527 (accessed 4 January 2024)
RPC II, no. 351: https://rpc.ashmus.ox.ac.uk/coins/2/351 (accessed 27 October 2023)
Viminacium Museum inv. 04_300; Field Inventory C-1100
Published: Vojvoda, Redžić 2024, 341, Cat. no. 265.

11. Mint of Philippopolis, Commodus, AD 177–192
**Obv.** AY KAI M – K[OMOΔOC]. Head laureate, right.
**Rev.** ΦΙΛΙΠΠΟ–ΠΟΛΕΙΤΩΝ. Demeter standing right, holding patera and torch.

Weight: 4.08 g; diameter: 18.44 mm, perforated; Viminacium, Više Grobalja, Trench 311
CN coin 55281, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55281
CN type 8466, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/8466 (accessed 4 January 2024)
Viminacium Museum inv. 04_238; Field Inventory C-14097
Published: Vojvoda, Redžić 2024, 342, Cat. no. 266.

12. Mint of Serdica, Marcus Aurelius, AD 161–169

**Obv.** AV KAI M AVRH – ANTΩNINOC. Head laureate, right.

**Rev.** CEP–ΔΩN. Tyche standing left, wearing kalathos, holding rudder and cornucopia.

Weight: 8.97 g; diameter: 25.60 mm; Viminacium, Rit, Trench 13

CN coin 55282, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55282

CN type 11480, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/11480) (accessed 4 January 2024)

RPC IV.1, no. 25088 (temporary no.): https://rpc.ashmus.ox.ac.uk/coins/4/25088

(accessed 24 November 2023)

Viminacium Museum inv. 04_253; Field Inventory C-602

Published: Vojvoda, Redžić 2018, 269, Cat. no. 67; Vojvoda, Redžić 2024, 337, Cat. no. 261.

13. Mint of Serdica, Septimius Severus, AD 198

**Obv.** AV • K • Λ • CEΠT Π – CEVHPOC • Π. Bust with drapery on left shoulder, head laureate, right.

**Rev.** • HΓE KAIKINA • ΛAPΓOV • OVΛΠIAC • CEP (around); ΔIKEC (below eagle). Eagle standing facing on thunderbolt, head right, wings spread, holding a wreath in beak.

Weight: 13.91 g; diameter: 32.52 mm; Viminacium, Pirivoj, Trench 42

CN coin 55283, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55283

CN type 21696, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/21696 (accessed 4 January 2024)

Viminacium Museum inv. 04_82; Field Inventory C-1349

Published: Vojvoda, Redžić 2024, 338, Cat. no. 262.

14. Mint of Serdica, Caracalla, AD 212–217

**Obv.** AVT K M AVP CEV – ANTΩNEINOC. Bust draped, cuirassed right, head laureate.

**Rev.** OVΛΠIAC – CEPΔIKHC. Asklepios standing front, head left, right arm leaning on serpent-staff, garment over left shoulder.

Weight: 16.25 g; diameter: 30.27 mm; Viminacium, Thermae, Room 1

CN coin 55289, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55289

CN type 11453, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/11453) (accessed 4 January 2024)

Viminacium Museum inv. 04_78; Field Inventory C-311

Published: Vojvoda, Redžić 2018, 269, Cat. no. 68; Vojvoda, Redžić 2019, 95, Cat. no. 150; Vojvoda, Redžić 2024, 339, Cat. no. 263.

15. Mint of Serdica, Caracalla, AD 212–217

**Obv.** AVT K M AVP CEV ANTΩNEINOC. Head radiate, right.

**Rev.** OVΛΠI–AC CEPΔIK // HC. Emperor in military attire riding right on horseback, raising right arm.

Weight: 15.05 g; diameter: 30.14 mm; Viminacium, Rit, Trench 124

CNcoin 55288, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55288

CN type 559, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/559

(accessed 4 January 2024)

Viminacium Museum inv. 04_254; Field Inventory C-2191

Published: Vojvoda, Redžić 2024, 340, Cat. no. 264.

**Lower Moesia**:

16. Mint of Tomis, Antoninus Pius, AD 138–161

**Obv.** [...] – ANTWNINOC. Head with taenia, left.

**Rev.** TOMITΩN – H MHTPOΠ (HM in ligature). Apollo (Bonus Eventus) standing facing, head left, holding patera and laurel branch.

Weight: 4.43 g; diameter: 20.00 mm; Viminacium, Nad Klepečkom, Trench 43

CN coin 55290, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55290

CN type 21700, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/21700 (accessed 4 January 2024)

RPC IV.1, no. 4381 (temporary number): https://rpc.ashmus.ox.ac.uk/coins/4/4381 (accessed 27 October 2023)

Viminacium Museum inv. 04_231; Field Inventory C-381

Published: Vojvoda, Redžić 2024, 354, Cat. no. 278.

17. Mint of Nicopolis ad Istrum, pseudo-autonomous coinage, end of the 2nd – beginning of the 3rd c. AD

**Obv.** No legend. Bust of winged Nike with mural crown, right.

**Rev.** ΠPOC[I] // ICTPON (dot in the middle). Legend within border of dots.

Weight: 1.34 g; diameter: 14.90 mm; Viminacium, Amfiteatar, Square F/3

CN coin 55291, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55291

CN type 21701, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/21701 (accessed 4 January 2024)

Viminacium Museum inv. 04_236; Field Inventory C-579

Published: Vojvoda, Redžić 2024, 351, Cat. no. 275.

18. Mint of Nicopolis ad Istrum, Elagabalus, AD 218–222

**Obv.** AYT K M AVP – [ANTΩNEINOC]. Bust draped, cuirassed, head radiate, right.

**Rev.** [YΠ NOBIOY POYΦOY NIKOΠOΛITΩN]// ΠPOC IC // TPON. Serpent with fishtail coiling,

bent four times, head surrounded by nimbus and rays, right.

Weight: 10.65 g; diameter: 25.90 mm; Viminacium, Više Grobalja, Trench 341
CN coin 55292, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55292
CN type 7530, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/7530 (accessed 4 January 2024)
RPC VI, no. 1279 (temporary no.): https://rpc.ashmus.ox.ac.uk/coins/6/1279 (accessed 27 October 2023)
Viminacium Museum inv. 04_245; Field Inventory C-14635
Published: Vojvoda, Redžić 2024, 353, Cat. no. 277.

19. Mint of Nicopolis ad Istrum, Elagabalus, AD 218–222
**Obv.** [AVT K M AVPH] – ANTΩNEINOC. Bust draped, cuirassed, head laureate, right.
**Rev.** [VΠ NOBIOV POVΦOV] – NIKOΠOΛITΩN ΠPOC ICT. Tyche standing left, wearing kalathos, holding rudder and cornucopia.

Weight: 15.39 g; diameter: 26.30 mm; Viminacium, Više Grobalja, Grave G-2762
RPC VI, no. 1287 (temporary no.): https://rpc.ashmus.ox.ac.uk/coins/6/1287 (accessed November 24th 2023)
CN coin 55293, in Corpus Nummorum: https://www.corpus-nummorum.eu/coins/55293
CN type 6427, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/6427 (accessed 4 January 2024)
Viminacium Museum inv. 04_247; Field Inventory C-14218
Published: Vojvoda, Redžić 2024, 352, Cat. no. 276.

20. Mint of Marcianopolis, Caracalla, AD 211–217
**Obv.** Illegible. Confronted head of Caracalla, laureate, and bust of Iulia Domna, draped.
**Rev.** VΠ KVNTILIANOV MAPKIANOΠOLITΩN // E. Temple front of a tetrastyle temple, shield (?) in pediment; within statue of Serapis, left, wearing kalathos, raising right arm, resting left arm on sceptre.

Weight: 9.15 g; diameter: 26.43 mm; Viminacium, Više Grobalja, Grave G-2335
CN coin 55294, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55294

CN type 8645, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/8645 (accessed 4 January 2024)
Viminacium Museum inv. 04_235; Field Inventory C-13279
Unpublished.

21. Mint of Marcianopolis, Elagabalus, AD v218–222
**Obv.** AVT K M AVPH – [ANTΩNEINOC]. Bust draped, cuirassed, head laureate, right.
**Rev.** VΠ [IOVΛ ANT CEΛE]VKOV MAPKIANOΠOΛITΩN. Hygieia standing right, feeding serpent from patera.

Weight: 9.46 g; diameter: 26.26 mm; Viminacium, Više Grobalja, Grave G-2776
CN coin 55295, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55295
CN type 11080, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/11080) (accessed 4 January 2024)RPC VI, no. 1386 (temporary no.): https://rpc.ashmus.ox.ac.uk/coins/6/1386
(accessed 27 October 2023)
Viminacium Museum inv. 04_248; Field Inventory C-14248
Published: Vojvoda, Redžić 2024, 349, Cat. no. 273.

22. Mint of Marcianopolis, Elagabalus, AD 218–222
**Obv.** AVT K M AVPH – ANTΩNEINOC. Head laureate, right.
**Rev.** VΠ IOVΛ ANT CEΛEVKOV M[APKIANOΠOΛITΩ]N. Nike advancing, left, holding laurel wreath and palm branch.

Weight: 11.34 g; diameter: 26.71 mm; Viminacium, Pirivoj, PLB V-15 (next to the Graves G-156 and G-157)
CN coin 55296, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55296
CN type 11008, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/11008) (accessed 4 January 2024)
RPC VI, no. 1488 (temporary no.): https://rpc.ashmus.ox.ac.uk/coins/6/1488
(accessed 27 October 2023)
Viminacium Museum inv. 04_391; Field Inventory C-425
Published: Vojvoda, Redžić 2024, 348, Cat. no. 272.

23. Mint of Marcianopolis, Severus Alexander, AD 222–226
**Obv.** AVT K M AVP CEVH ΑΛΕΖΑΝΔΡΟC. Head laureate, right.
**Rev.** VΠ TIB IOVΛ ΦHCTOV MAPKIANOΠOΛIT // ΩN. Eagle with spread wings facing, head left, holding wreath in beak.

Weight: 9.16 g; diameter: 25.70 mm; Viminacium, Pećine, Trench 534
CN coin 55297, in Corpus Nummorum: https://www.corpus-nummorum.eu/CN_55297
CN type 11975, in Corpus Nummorum: https://www.corpus-nummorum.eu/types/11975 (accessed 4 January 2024)
RPC VI, no. 1641 (temporary no.): https://rpc.ashmus.ox.ac.uk/coins/6/1641
(accessed 27 October 2023)
Viminacium Museum inv. 04_240; Field Inventory C-14092
Published: Vojvoda, Redžić 2024, 350, Cat. no. 274.

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If one considers both the examples of Thracian and Lower Moesian mints published earlier (Vojvoda 2011, 139–152, Tables 1–2; Vojvoda, Tapavički-Ilić 2018, 129–143, Table 1) and the newly presented ones discovered in Viminacium, listed according to the rulers and members of their families, their frequency shows the following:

**Table 1.** The number of coins from Thracian and Lower Moesian mints discovered in Viminacium, listed according to the rulers.

| No. | Mint | Mint Total pc. / pcs. | Emperor or family member | Piece / Pieces |
|---|---|---|---|---|
| 1 | **Anchialus** | **3** | | |
| | | | Hadrian | 1 |
| | | | Gordian III | 2 |
| 2 | **Byzantium** | **1** | | |
| | | | Unknown (Caracalla ?) | 1 |
| 3 | **Deultum** | **2** | | |
| | | | Macrinus | 1 |
| | | | Gordian III | 1 |
| 4 | **Hadrianopolis** | **9** | | |
| | | | autonomous coinage 3rd c. | 1 |
| | | | Caracalla | 3 |
| | | | Gordian III | 5 |
| 5 | **Mesembria** | **1** | | |
| | | | Philip I | 1 |
| 6 | **Pautalia** | **18** | | |

| No. | Mint | Mint Total pc. / pcs. | Emperor or family member | Piece / Pieces |
|---|---|---|---|---|
| | | | Antoninus Pius | 1 |
| | | | Marcus Aurelius | 2 |
| | | | Faustina II | 3 |
| | | | Septimius Severus | 3 |
| | | | Caracalla | 7 |
| | | | Geta | 2 |
| 7 | **Perinthos** | **4** | | |
| | | | Septimius Severus | 1 |
| | | | Caracalla (medallion) | 1 |
| | | | Geta | 1 |
| | | | Severus Alexander | 1 |
| 8 | **Philippopolis** | **6** | | |
| | | | Domitian | 1 |
| | | | Antoninus Pius | 4 |
| | | | Commodus | 1 |
| 9 | **Plotinopolis** | **1** | | |
| | | | Faustina II | 1 |
| 10 | **Serdica** | **6** | | |
| | | | Marcus Aurelius | 1 |
| | | | Lucius Verus | 1 |
| | | | Septimius Severus | 1 |
| | | | Caracalla | 3 |
| 11 | **Traianopolis** | **1** | | |
| | | | Geta | 1 |
| 12 | **Marcianopolis** | **5** | | |
| | | | Caracalla | 2 |
| | | | Elagabalus | 2 |
| | | | Severus Alexander | 1 |
| 13 | **Nicopolis ad Istrum** | **10** | | |
| | | | Commodus | 1 |
| | | | Septimius Severus | 1 |
| | | | Caracalla | 3 |
| | | | Plautilla | 1 |
| | | | Elagabalus | 4 |
| 15 | **Tomis** | **1** | | |
| | | | Antoninus Pius | 1 |
| | **TOTAL** | **68** | | **68** |

If this data is listed chronologically, regardless of the mint they originate from, the following results are gained:

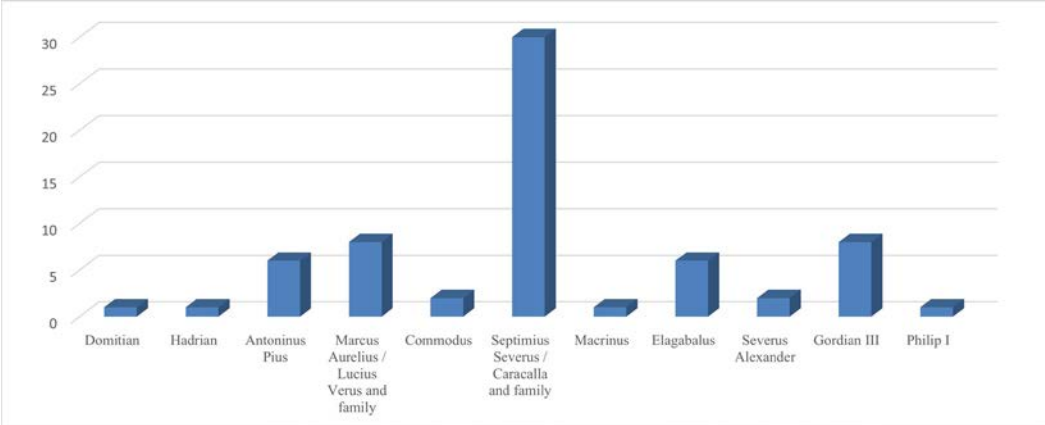


**Fig. 5.** The total number of coins from Thracian and Lower Moesian mints discovered in Viminacium, listed according to rulers.

It turns out that the greatest influx of the coinage from the Thracian and Lower Moesian mints discovered in Viminacium so far took place during the reigns of Septimius Severus and Caracalla (**Fig. 5**). This fits well into the image of provincial coinage circulation in the entire territory of Upper Moesia (**Figs. 2–3**), where there is a certain influx of coinage from mints in Macedonia, Thrace, and Lower Moesia, which ended during the reign of Caracalla. If one observes the influx of coins from the Thracian and Lower Moesian mints in Viminacium, one notices that during the 1st century, these mints contributed a lower percentage of coinage. From the beginning of the 2nd century and especially during the reigns of Antoninus Pius and Marcus Aurelius, this influx grew significantly bigger (**Fig. 5**). From the 1st and the 2nd centuries, there are coins from six Thracian and two Lower Moesian mints: Anchialus, Pautalia, Philippopolis, Plotinopolis, Serdica, Nicopolis ad Istrum, and Tomis (**Table 1**).

The greatest influx of coinage from the Thracian and Lower Moesian mints in Viminacium occurred during the reigns of Septimius Severus and Caracalla (**Fig. 5**). They originated from the following mints: Hadrianopolis, Pautalia, Perinthos, Serdica, Traianopolis, Marcianopolis, and Nicopolis ad Istrum (**Table 1**). After this period, there was a significant decrease in the influx from these mints, since this was the period in which coinage from the Bithynian mint Nicaea was dominant in monetary circulation. This situation remained unchanged until the reign of Gordian III and the establishment of the provincial mint in Viminacium in the year 239. In the period that followed, it dominated the circulation of this kind of coinage.

Besides the already mentioned data and the lack of small bronze coinage at the end of the 2nd and the beginning of the 3rd centuries in Upper Moesia and in both Pannonias – also confirmed with monetary finds analyses – it is possible that additional circumstances occurred for the appearance of provincial coinage in the coin circulation of these provinces, especially in Viminacium. Its geographic position at the crossroads of land routes, with the main route among them leading towards the south and the city of Naissus, then further on to Thrace and the Bosphorus, caused it to become one of the important stops on the road towards the East. The wars that took place in the East from the reign of Septimius Severus, and becoming more and more frequent during the reign of his heirs, led to a large circulation of people, merchandise, and money along the road through Thrace and Upper Moesia. It is obvious that at the same time, several factors combined to lead to a larger monetary circulation between the provinces in the Balkans and Asia Minor – especially Bithynia – over Thrace and Upper Moesia and even further on, towards the west. With their large sample and clear find contexts, monetary finds from the archaeological excavations of Viminacium have to a large extent contributed to solving the question of provincial coinage circulation in this part of the Roman Empire. We hope that further attempts to publish as

many monetary finds as possible from Moesia Superior, Thrace, and Moesia Inferior will help to bring about a better understanding of the historical circumstances and consequences they had on life in these neighbouring provinces.

**Bibliography**

Борић-Брешковић, Б., 1976. Новац колоније Виминацијум у збирци Светозара Ст. Душанића. Музеј града Београда, Београд.

Борић-Брешковић, Б., Војвода, М., 2018. Коинон Македоније. Римски провинцијални новац из збирке Народног музеја у Београду и са јужних некропола Виминацијума. Нумизматичар 36, 19–50.

Војвода, М., 2011. Реверсне представе са војним ознакама ковнице у Никеји на основу узорака са виминацијумске некрополе Више гробаља. Гласник Српског археолошког друштва (САД) 25, 243–256.

Војвода М., 2013. Новац битинијске ковнице Никеје са виминацијумске некрополе Више гробаља,. Нумизматичар 31, 155–196.

Војвода, М., Рељић, С., 2018. Прилог проучавању тежина римског империјалног и провинцијалног новца (пример виминацијумских јужних некропола). Нумизматичар 36, 2018, 51–71.

Војвода, М., Рељић, С., 2019. Редак налаз новца Ханибалијана из једне гробне целине на Виминацијуму. Нумизматичар 37, 261–267.

Borić-Brešković, B., Vojvoda, M., 2017. Coins of the Stobi Colony from the Necropolises of Viminacium – Više Grobalja and Pećine. Numizmatičar 35, 7–31.

Borić-Brešković, B., Vojvoda, M., 2018. Circulation of Provincial Coins of the Viminacium Colony, in: Golubović S., Mrđić N. (eds.), VIVERE MILITARE EST, From Populus to Emperors – Living in the Frontier, Vol. II. Institute of Archaeology, Belgrade, 73–100.

Mirković, M., 1968. Rimski gradovi na Dunavu u Gornjoj Meziji. Arheološko društvo Jugoslavije, Beograd.

Vojvoda, M., 2011. Coins from Mints of Thrace and Lower Moesia on the Viminacium Cemetery Više Grobalja. Archaeology and Science 6, 139–152.

Vojvoda, M., 2015. Perforated Coins from Graves at the Viminacium Necropolis of Više Grobalja. Starinar LXV, 53–78.

Vojvoda, M., 2017a. Coins of the Viminacium Mint from the Pećine Necropolis (Viminacium). Archaeology and Science 12, 51–74.

Vojvoda, M., 2017b. Coins of the Bithynian Mint of Nicaea from the Viminacium Necropolis of Pećine. Starinar LXVII, 131–150.

Vojvoda, M., 2018. Perforated Coins from Graves at the Viminacium Necropolis of Pećine. Starinar LXVIII, 65–87.

Vojvoda, M., 2019. Nero Tetradrachm Minted in Alexandria Found at Pećine Necropolis (Viminacium). Archaeology and Science 15, 71–75.

Vojvoda, M., Anđelković Grašar, J., 2022. Viminacium – History and Research, in: M. Vojvoda, B. Milovanović, I. Danković (eds.), VIVERE IN VRBE VIMINACIVM, Vol. I. Institute of Archaeology, Belgrade, 9–19.

Vojvoda, M., Crnobrnja, A., 2018. Circulation of the Coins of Bithinian Mint of Nicaea in Moesia Superior, In: Ivanišević V., Borić-Brešković B., Vojvoda M. (eds.) Proceedings of the International Numismatic Symposium »Circulation of Antique Coins in Southeastern Europe«, Viminacium 2017, Institute of Archaeology, Belgrade, 131–141.

Vojvoda, M., Crnobrnja, A., in print. Coins from Thracian Mints at the Territory of Present-Day Serbia, in: Proceedings of the 3rd International Roman and Late Antique Thrace Conference,

Komotini, Greece, 2018.

Vojvoda, M., Golubović, S., Redžić, S., 2021. Coin Finds from the Eastern Viminacium Necropolis – the Site Kod koraba. Archaeology and Science 17, 53–81.

Vojvoda, M., Mikić I., 2020. Distribution Ratio of Issues from the Mints of Viminacium and Dacia: the Example of Southern Necropoles of Viminacium. Archaeology and Science 16, 119–126.

Vojvoda, M., Mikić, I., 2023. Coins as Grave Goods in Child Inhumation Graves and Their Position in Relation to the Deceased. Case of the Viminacium Southern Necropolis, in: Bulgarian Numismatic Journal, Vol. 1, No. 1, Sofia 18–29.(https://bulgnj.com/index.php/e-journal/article/view/8)

Vojvoda, M., Mrđić, N., 2015. Coin Finds from the Viminacium Necropolis of Više Grobalja and Their Role in Funerary Ritual. Institute of Archaeology, Belgrade.

Vojvoda, M., Mrđić, N., 2017. Coin Finds from the Viminacium Necropolis of Pećine and Their Role in Funerary Ritual. Institute of Archaeology, Belgrade.

Vojvoda, M., Redžić, S., 2018. Circulation of Roman Coins in the Serbian Part of the Limes (1st – 5th Century), In: M. Korać, S. Pop-Lazić (eds.) Roman Limes and cities in the territory of Serbia. SANU, Archaeological institute, Belgrade, 50–55; 239–281.

Vojvoda, M., Redžić, S. 2019. Roman Coins Discovered During Archaeological Investigations of Thermae at Viminacium (2003–2007). Journal of Ancient History and Archaeology (JAHA) Vol 6 no. 3/2019, 79–98.

Vojvoda, M., Redžić, S., 2020a. A Hoard of Solidi from a Hypogeum at the Viminacium Necropolis of Pećine. Arheološki vestnik 71, 217–231.

Vojvoda, M., Redžić, S., 2020b. Incidence of Denominations in Graves at the Viminacium Southern Necropolises. Archaeology and Science 16, 113–117.

Vojvoda, M., Redžić, S., 2024. VIVERE IN VRBE. VIMINACIVM, Vol. 2, Monetary Finds and the Viminacium Mints. Institute of Archaeology, Belgrade 2024.

Vojvoda, M., Tapavički-Ilić, M., 2018. Coins from Thracian and Lower Moesian Mints from the Viminacium Necropolis of Pećine. Archaeology and Science 13 (2017) 2018, 129–143.

# Defining the "Valencia Mint" Entries within Dédalo and monedaiberica.org: the Kingdom of Valencia Numismatic Project for Medieval Coinages (Iberian Peninsula) in a Completely Digital Environment

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**Abstract:** At the end of 2022, we had the idea to expand the Moneda Ibérica project (monedaiberica.org), which focuses on the ancient coinage of the Iberian Peninsula, to encompass the Christian medieval period of the Kingdom of Valencia. This period is well-documented through decades of study and is thus well understood. For this reason, we thought that it was suitable as a test for potential expansions to other periods or territories of Moneda Ibérica in the future. Consequently, between 2022 and 2023, it was decided to initiate the Kingdom of Valencia Project, a database intended to compile all Valencian coinage from the 13th to the 15th centuries. The ultimate goal is to produce an accessible digital catalogue based on Dédalo, encompassing all of these coin productions.

**Keywords:** Database, Online catalogue, Dédalo, Medieval ages, Kingdom of Valencia.

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## 1. Introduction: Dédalo and Moneda Ibérica (monedaiberica.org)

In June 2023, we made the decision to present the initial steps of the Kingdom of Valencia Project for the digital cataloguing of medieval coinage from this region – situated in the Iberian Peninsula and presently part of Spain – at the "10th Joint Meeting of ECFN and Nomisma.org & 2nd BulgNR Together" held in Sofia, Bulgaria. Alongside showcasing our project, we seized the opportunity to discuss the challenges related to data introduction and the concept of definition for digital entries. These are concerns we share with other digital initiatives like Nomisma Medieval and Modern, currently in the development phase. Our focus has centred on the Valencia mint as an exemplar, as it is the workshop responsible for producing all coinages featured in the future catalogue. However, similar to many other medieval cases in Europe, the Valencia mint has a history characterised by prolonged and irregular activity.

The Kingdom of Valencia Project doesn't emerge out of nowhere. It's being developed by leveraging robust tools like Dédalo, and is founded on the functionality of another well-established

digital coin catalogue, such as MIB (an abbreviation for Moneda Ibérica / Iberian Coins, accessible on the site monedaiberica.org, **Fig. 1**), managed through a content system called Numisdata, again built upon the open-source engine Dédalo. The outcome is an openly accessible website serving as a digital repository for ancient coinage, focusing on the Iberian period across the Iberian Peninsula and southern France. Presently, it compiles approximately 4,200 monetary types issued by over 200 different cities from the 6th to the 1st centuries BC, sourced from auctions, private collections, museums, monetary hoards, and archaeological discoveries.

**Fig. 1.** Screenshot of the Moneda Ibérica homepage (monedaiberica.org; accessed on 15/02/2024).

Numisdata, as previously mentioned, is built upon Dédalo, a powerful tool created in 1998 for managing cultural heritage content (since then, the creators and developers have been A. Peña and J. F. Onielfa, from Render Comunicación). Its implementation began at the Museum of Prehistory in Valencia in 2015. Recognising the vast potential of Dédalo, it was harnessed to develop a numismatic catalogue capable of facilitating collaborative work and online content publication. Development of the dedicated numismatic manager, known as Numisdata, commenced in 2016.

The foundational content framework was derived from the numismatic archive curated by P. P. Ripollès since the 1980s and gradually digitised from 2006 onward into an initial FileMaker database. Furthermore, Numisdata refined its functionality based on data collected from two smaller digital catalogues: one dedicated to monetary finds in Sardinia[1] (**Fig. 2**), and the other to the Vidal Valle collection of Valencian coins (**Fig. 3**). The latter encompasses monetary emissions from all historical periods, ranging from antiquity to the 20th century, within Valencian territory.[2]

Towards the end of 2017, with all these previous developments, the implementation of MIB commenced, and content testing for the digital catalogue was initiated, hosted at the address https://monedaiberica.org/ (Gozalbes et al. 2021, 538–539). Presently, monedaiberica.org has established itself as a prominent catalogue of ancient coins, offering complete accessibility and featuring a continuously expanding corpus of information.

With the support of the Dédalo engine, the content organisation of Numisdata, and the model of monedaiberica.org, and with the aim of expanding Moneda Ibérica to other chronological periods, the Kingdom of Valencia Project was born. The first steps were taken between 2022 and

[1] https://sardinia.numisdata.org/web_sardinia/web/ [last accessed on 29/07/2025].
[2] https://numisdata.org/vidalvalle/ [last accessed on 15/02/2024].

2023, planning and organising all of the content that the project would encompass. This content would consist, for the time being, of the Valencian monetary productions from the Christian or feudal medieval period, with a well-defined range between the year 1247 and the reign of Ferdinand II of Aragon (1479–1516).

**Fig. 2.** Screenshot of the Numisdata Sardinia homepage (https://sardinia.numisdata.org/web_sardinia/web/; accessed on 29/07/2025).

**Fig. 3.** Screenshot of a Vidal Valle digital catalogue page ( https://numisdata.org/vidalvalle/, accessed on 15/02/2024).

## 2. The coinage of medieval Christian Valencia: an urgent need for digitalization

The medieval kingdom of Valencia was established by King James I of Aragon in 1239 after the conquest of the territory known as Sharq al-Andalus from the Muslims (**Fig. 4**). This event occurred within the broader context of European feudal expansion during the 12th and 13th centuries, particularly the pressure exerted by the Hispanic kingdoms on the various Muslim territories of the Iberian Peninsula. James I of Aragon's conquest, carried out roughly between 1233 and 1245, involved the capture and annexation of a large new territory that became part of the royal domains of the counts of Barcelona and kings of Aragon (**Fig. 5**). This newly acquired area, now integrated into Western Christendom, required organisation according to Christian customs and practices, encompassing social, legislative, and fiscal aspects.

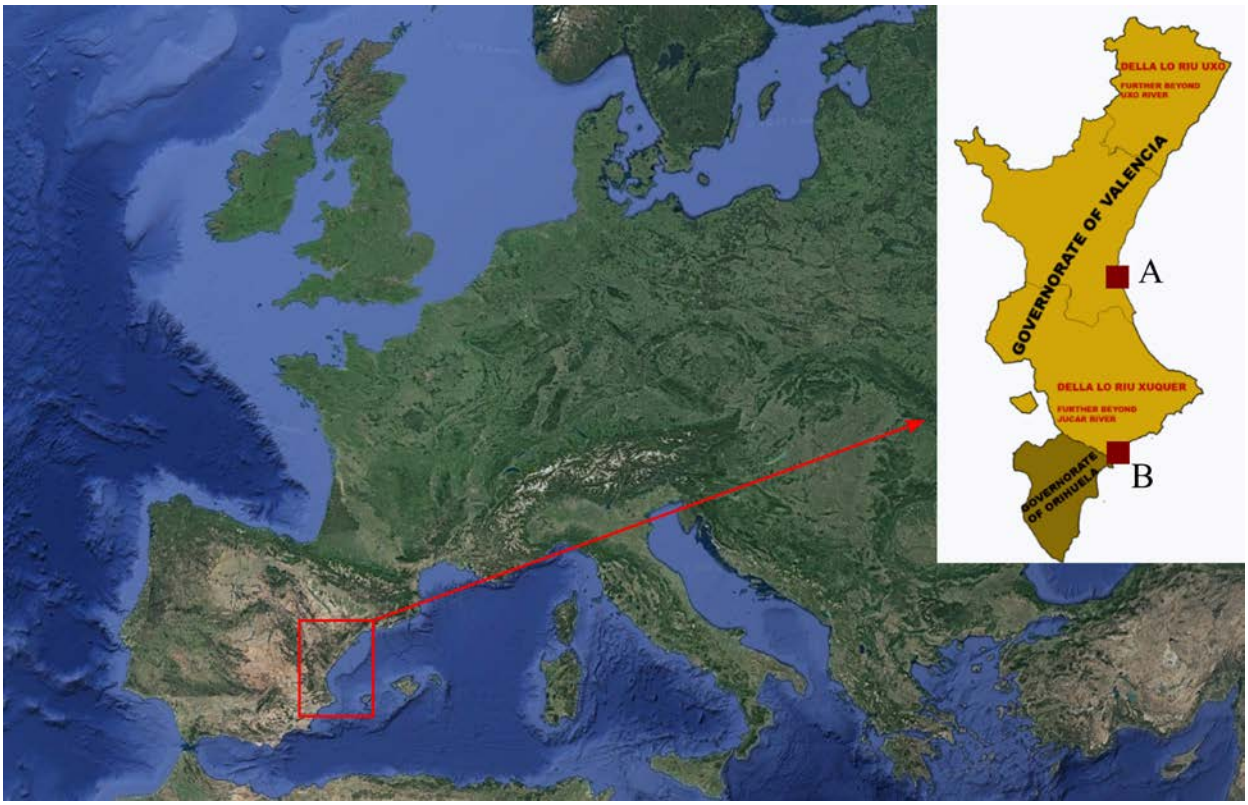


**Fig. 4.** Location map of the medieval Kingdom of Valencia and its two main mints (A: mint of Valencia; B: mint of Alicante). Map taken from Wikipedia, under CC license.

**Fig. 5.** Christian conquest process of the Kingdom of Valencia from the Muslims.

Therefore, in the year 1247, James I of Aragon ordered the reorganisation of the circulating currency, which until then had been very diverse and from different origins due to the arrival of conquerors and settlers. This currency presented varying rates of purchase and exchange, so it seemed necessary to establish a unified value. For this reason, in 1247, a mint was established in the capital of the kingdom, Valencia, and a new type of currency was imposed for the Kingdom of Valencia and Mallorca (in the latter, until the death of King James I in 1276). The new currency was named as *reial*, a penny made of billon (**Fig. 6**). It would be minted with a standard of three silver diners out of twelve, imitating the composition of other European currencies of the time. The silver content had to be eleven and a half diners. The reial would henceforth be the mandatory currency for tax payment in the Kingdom of Valencia.

**Fig. 6.** James I of Aragon's reial coined in the Valencia mint in 1247.

It is known that the mint of Valencia carried out two major coinages during the lifetime of James I of Aragon. The first occurred between the years 1247 and 1249, with the typical interruptions inherent to medieval minting works, and the other in 1271. Researchers such as J. Torró estimate that, between the two coinages, approximately 40 million pieces were released into the markets, including pennies and half-pennies (Torró 2000, 55, 57). Small and fractional currency during the Late Middle Ages was always a significant concern. This massive issuance aimed to address the currency needs of settlers and new inhabitants of the kingdom, although it soon became apparent that it would be insufficient.

Since the conclusion of the coinage in 1271, the Valencia mint remained closed. None of the successors of James I of Aragon resumed coin minting in the city until the reign of Peter IV of Aragon (1336–1387), who exclusively minted gold coins in the capital. In this instance, they aimed to replicate the gold florins that had saturated the European markets, albeit with a lower purity in this case. The emergence of new base metal coinage in Valencia would have to wait until the 15th century, during the reign of Alfonso V of Aragon. From then onward, the Valencia mint would resume almost uninterrupted activity until the 18th century. Throughout the 15th century, it would produce various types of currency, some enduring successfully over time, while others were swiftly withdrawn due to their lack of acceptance among users, such as the gold *timbres* (**Fig. 7**). The mint also produced gold ducats of varying values (15th and 16th centuries), *corones* or Valencian crowns (16th century), and silver coins such as royal ducats, half ducats (15th and 16th centuries), *dihuités*, valued at 18 pence (17th century), and *reials* (18th century), along with other denominations in copper and base metals such as *sisons* or *tresetes* (18th century). The mint halted its operations in 1748, though it would sporadically mint coins again in 1810 under the name of Ferdinand VII of Spain, albeit under vastly different circumstances from those of the preceding monetary establishment (Mateu y Llopis 1929).

**Fig. 7.** Various coins of billon, silver, and gold produced at the Valencia mint (A: gold florin of Peter IV; B: silver reial of Martin I; C: menut or billon penny of Alfonso V; D: gold timbre of Alfonso V; E: gold ducat of John I; F: menut, diner or billon penny of Ferdinand II; images taken from Aureo&Calicó auctions).

Although the medieval and modern coinage repertoire of the Kingdom of Valencia is well known and has been previously studied (to name a few: Mateu y Llopis 1929; Petit 1981; Petit, Aledón 1983; Sendra 2008), and is also fairly well serialised (Crusafont 2009), there is currently no digital catalogue that rigorously compiles all these coinages produced in the Valencian terri-

tory between the 13th and 15th centuries. It's worth noting that there is also none available for Muslim coinages or for those of the modern era, beyond an interesting attempt to digitise the series of *dieciochenos* or *dihuités* (pieces of 18 pence) driven by J. A. Sendra.[3] In June 2019, a significant step forward was taken in utilising digital resources to make Valencian medieval productions available online, starting with the donation of the private collection of Vidal Valle Ortí, "whose greatest effort, and the one he devoted more time to [...], was his collection of Valencian coins [...]. The collection of coins gathered by Valle Ortí were all Valencian and covered the spectrum of monetary production in the Valencian territory throughout all periods."[4] That year, the Museum of Prehistory of Valencia launched the website https://numisdata.org/vidalvalle/, making part of Vidal Valle's collection accessible to all interested users, along with some texts containing key information about the periods covered by the different coins in the Valencian territory (Ripollès et al. 2020, 313–314).

However, while https://numisdata.org/vidalvalle/ provides a good representation of the medieval monetary productions of the Christian Kingdom of Valencia, it does not function as a specific digital catalogue encompassing all coinages from the Valencian territory. Instead, it serves as a catalogue of part of a private collection. Consequently, it lacks types, variants, dies, and other aspects that would provide a comprehensive overview of the productions from a specific location or mint. Significant efforts are being made for the digitisation of types and the creation of online catalogues for Castilian coinage, such as https://monedamedieval.es/, led by A. Roma, or https://wearenumismatics.com/imperatrix/, spearheaded by A. Serrano. However, these efforts do not constitute collaborative databases of the same kind as the one based on Dédalo for MIB. This is the issue that the Kingdom of Valencia Project aims to address, building upon all the aforementioned precedents.

## 3. The Kingdom of Valencia Project: From Early Steps to Future Prospects

The content of the Kingdom of Valencia Project is centred around the medieval Christian coin productions of the Valencia mint spanning from 1247 to the reign of Ferdinand II of Aragon (1479–1516). Additionally, it includes the brief coinage production of the Alicante mint during the reign of James II of Aragon (operating between 1296 and 1301; see **Fig. 4**). This planned content, which is actively being developed, generates a significant amount of data – encompassing not only coin types but also mints, authorities, coin images, die identification, weights, modules, and other fields of information that require proper management. Therefore, from the outset, it was recognized the necessity of employing a robust management tool like the Dédalo engine, not only for its capacity to handle vast volumes of data but also due to the positive prior experience with the Prehistory Museum of Valencia and the University of Valencia in cataloguing projects for Sardinia, Vidal Valle, and Moneda Ibérica.

In our case, we faced two options when approaching the new project: either starting a fresh installation of the Dédalo platform, essentially from scratch, or integrating into the existing setup for Moneda Ibérica. Perhaps, in this context, the more fitting term would be "integration". Between the two choices, the latter appeared the most reasonable, as it allowed us to build upon much of the existing work and utilise resources such as thesauri or libraries. Additionally, it provided an opportunity to enhance the already progressed work by defining fields and terms beyond the ancient period. Moreover, with the new project, the scope of Moneda Ibérica was expanded, giving a broader interpretation to its name: encompassing coinages from the Iberian Peninsula across any period.

As previously mentioned, embedding ourselves within MIB provided us with several advantages and helped to mitigate some of the major challenges inherent in such digital projects, with maintenance being the primary concern. In this context, Numisdata – and specifically in our case, Moneda Ibérica – facilitates shared maintenance. This ensures that the responsibility for upkeep is not solely placed on one individual, manager, or institution. Such a collaborative ap-

[3] https://dieciochenos.wordpress.com/ [last accessed on 06/02/2024].
[4] https://numisdata.org/vidalvalle/, [last accessed on 15/02/2024].

proach minimises the risk of potential data loss and significant disruption if personnel or funding were to be withdrawn from the platform, database, or website where the catalogue is published. Dédalo, serving as the management engine, operates as a collaborative and open access system where authorised project administrators can introduce and modify data at any time. The departure of a contributor does not result in data loss, as the information remains stored in the system and can be accessed and utilised by future project members or repurposed for other initiatives.

From this standpoint, the initial stages of the Kingdom of Valencia Project have entailed the extensive data input into the system: a catalogue of coin types sourced from existing series of Valencian coinage; photographs of the types obtained, primarily from public auctions and institutions that have shared their content online; as well as information on weights, measurements, descriptions, and legends (to which their own typography will be applied in the future, already designed for previous works, such as Sanchez, 2021, and in press). Additionally, all relevant supplementary data allowing for independent cataloguing in the near future has been included. Once the primary database containing all known coin types minted in the Valencian territory during the medieval Christian period is finalised, the online catalogue can be launched. This catalogue will continue to evolve through the refinement of existing data and the addition of new entries. Looking ahead, the Kingdom of Valencia Project aims to integrate numismatic discoveries – both individual and from archaeological contexts, as well as those from coin hoards, many of which are already well-documented (Sanchez 2022) – while others are still under study. It's worth noting that the integration of numismatic findings has already been successfully implemented in Numisdata (Peña, Gozalbes 2021).

### 4. A specific challenge to address: defining the concept of "mint" over time in a digital catalogue

One of the initial tasks within the Kingdom of Valencia Project has been to define working concepts. While this task had previously been undertaken for Numisdata and monedaiberica.org, it required adaptation for a project focused on the medieval period. The specific concept under consideration here is that of a "mint", or, more precisely, the "Valencia mint". Faced with this challenge, we must determine where and how to delineate this broad concept based on the historical period being studied, without resorting to more complex concepts such as "medieval mint of Valencia", which, in turn, presents its own set of challenges. Dédalo has enabled us to address this issue by establishing various relationships among the entries created in the database.

At this point, before moving forward, it's crucial to note that mints are part of a thesaurus in Dédalo. Through this tool, different types of relationships can be established between mints or across different time periods, addressing one of the challenges we needed to tackle. The platform encompasses two key relationships: "changes to" and "related to". These fields are indicated in red in **Fig. 8**, which depicts one of the most extensively developed mint entries in MIB. This example serves to illustrate the complexity surrounding the concept of a "mint" for the medieval Valencia mint.

The Iberian mint of Bolskan stands out as one of the most extensively studied within the context of Moneda Ibérica. Through the establishment of internal connections, users can navigate to other related mints, such as the Bolskan mint during the Roman era. In this scenario, despite minting activities remaining centralised in the same locale, a decision was made to bifurcate Bolskan into two distinct entries, driven by two primary factors: the transition between historical periods (from the Iberian era to the Roman era) and the shift in nomenclature from Bolskan to Osca (**Fig. 9**). The link between them remains steadfast, unaffected by any alterations in content, ensuring that URLs remain unchanged and relationships remain intact. Moreover, if linked from another webpage, the connection to the Bolskan mint remains stable even amidst modifications to the original entry's content. This functionality exemplifies one of the most significant aspects of Dédalo and Moneda Ibérica, facilitating the establishment of enduring relationships across different periods, such as the case of Bolskan-Osca: the same minting facility, situated in the same location, but operating in distinct historical periods, reflecting temporal evolution.

The matter becomes more intricate when we delve into the medieval mint of Valencia. The initial inquiry we must pose is: how many mints bearing the same name have existed from the city's foundation in the 2nd century BC to the permanent closure of the mint in the mid-18th century? Is it consistently the same concept, or are there ample indications to justify creating several distinct entries with similar names and interlinking them?

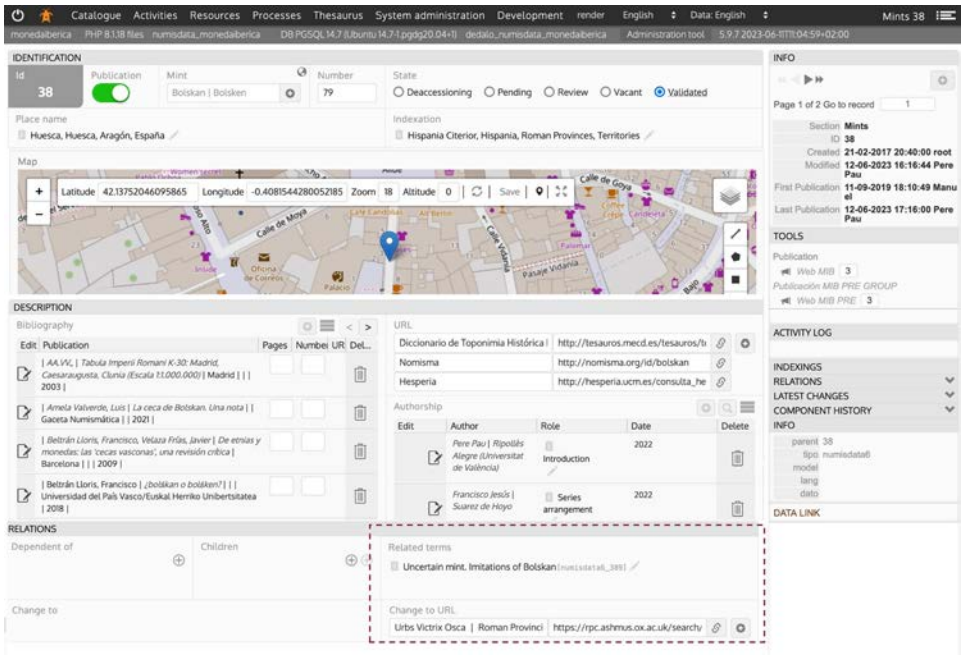


**Fig. 8.** Fields "changes to" and "related to" in a mint entry.

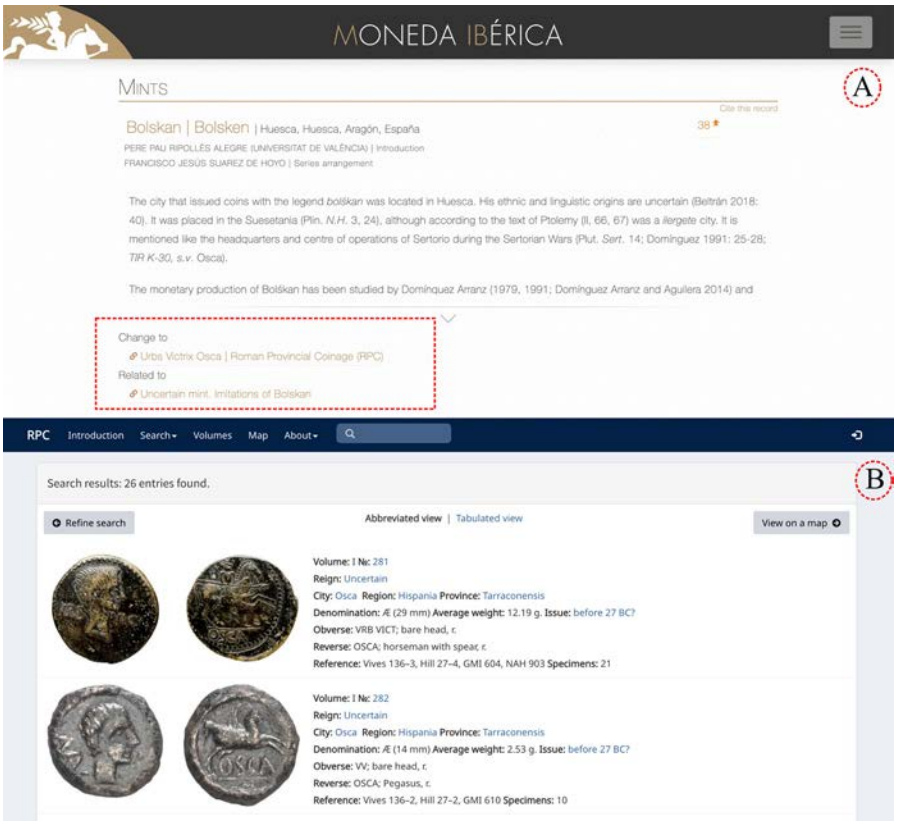


**Fig. 9.** Related pages dedicated to the mints of Bolskan (A: MIB) and Osca (B: RPC).

The traditional historiographical division of Valencia's coin production, focused not on the territory (which also includes the mint of Alicante during the Late Middle Ages, as previously indicated), but on the city's workshop, establishes five chronological periods according to the main historical divisions of the region:

1. The Roman mint, when the city was named Valentia (2nd century BC to the 5th century AD).

2. The Visigothic mint, with the same name as the previous one (5th century AD to the 8th century AD).

3. The medieval Muslim mint, when the city changed its name to Balansiyah (from the early 11th century to the first half of the 13th century, until the feudal conquest in 1238; **Fig. 10**).

4. The medieval Christian mint, established after the feudal conquest of the territory and founded in 1247 by order of King James I of Aragon with the name of Valencia.

5. The Modern Age mint, which retained the name Valencia until its closure. This period is established between the death of Ferdinand II of Aragon in 1516 and the closure of the mint in 1748. It includes occasional reopenings, such as that of 1810. Although portrayed as a unified period, it encompasses a significant duration marked by essential changes, which will unveil its complexity in the broader undertaking of cataloguing Valencia's coinage.

From all these divisions – following the criteria we've outlined for Bolskan-Osca – it seems evident that the Roman, Visigothic, and Islamic mints present enough distinctions to warrant being regarded as separate entries, albeit with connections between them. There are clear breaks in production and issuing authorities, but do the same distinctions apply between the medieval and modern-era mint?

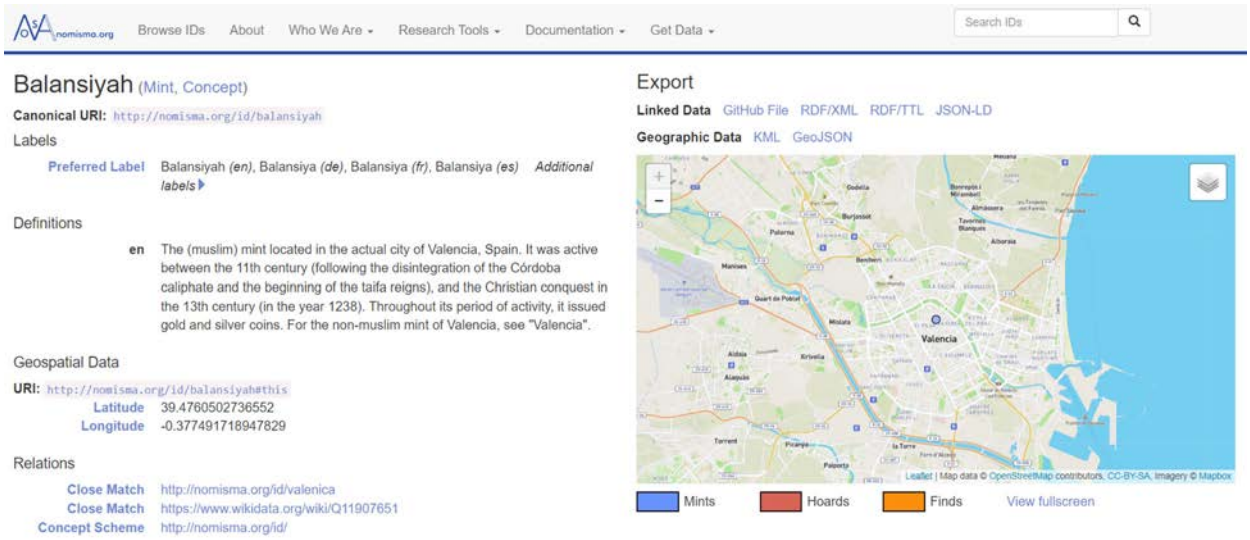


**Fig. 10.** Balansiyah entry in nomisma.org.

The need to separate the mint of Balansiyah from the mint of Valencia seems undeniable, given that both had distinct monetary systems under entirely separate social, political, and fiscal structures. It is logical to establish separate entries for Balansiyah and Valencia in Dédalo, mirroring the differentiation made in the definitions on nomisma.org.[5] However, the distinction between productions of the Late Middle Ages and the Modern Age is more ambiguous. Aside from the introduction of new coin types, the monetary system, as well as the political, fiscal, and social systems, remain largely unchanged, along with the currency's usage and circulation networks.

[5] https://nomisma.org/id/balansiyah for the medieval Islamic mint and https://nomisma.org/id/valencia for the medieval Christian and modern mint.

Therefore, it is worth considering whether it is necessary to create a division between these two concepts – medieval and modern – or if maintaining unity, as done in the Nomisma Med/Mod project, would be more appropriate for ours.

### 4.1. The "mint" entry in the Kingdom of Valencia project

Within the structure of the monedaiberica.org system, which is utilised to establish the foundations of the Kingdom of Valencia Project, a specific structure is designated for entries concerning a mint. Illustrated in **Fig. 11** is an example of such an entry from the latest iteration of Dédalo (October 2023), representing the mint of Valencia during the medieval and modern periods. While the entry has been created, it remains incompletely defined in terms of content, pending a decision on whether to consolidate the medieval Christian period with the Modern Age.

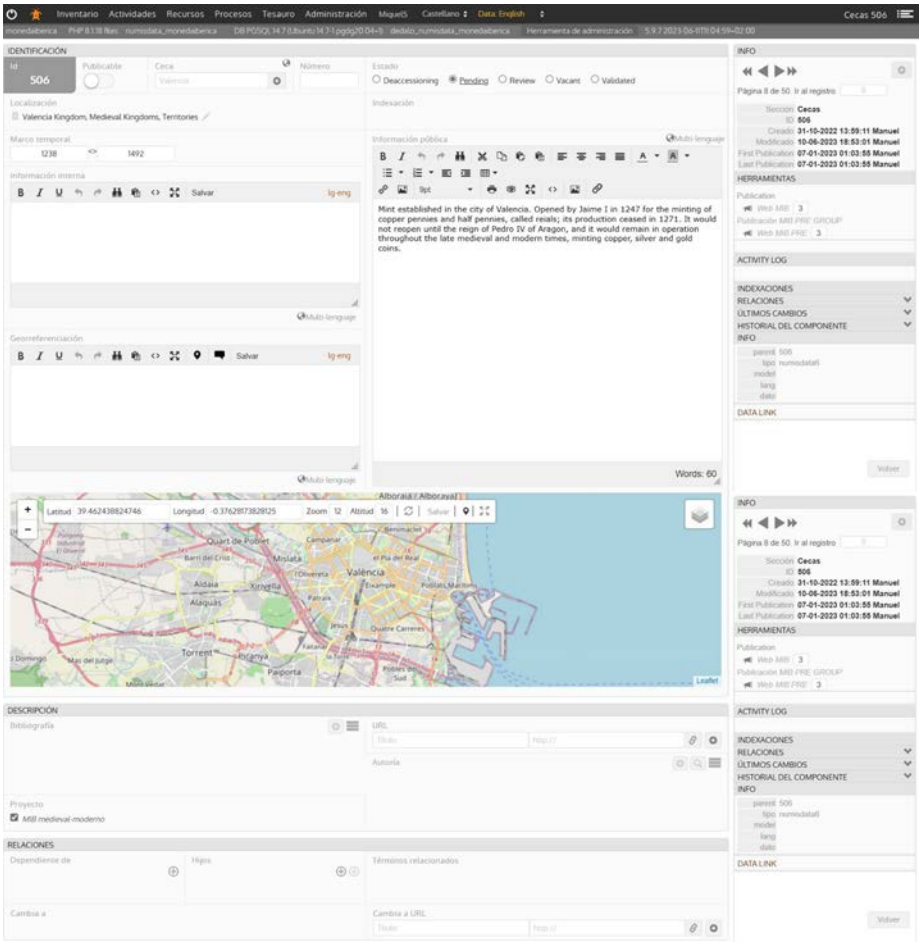


**Fig. 11.** Fields comprising a mint record, such as the one for Valencia.

Firstly, the mint is identified by a unique and immutable number, enabling its permanent location within the system. This identifier, akin to the relationship links previously described, remains entirely stable. Secondly, the mint's name is established, with Valencia being the case in point, along with the provision to incorporate alternative or additional denominations if required. Like the majority of fields, this one supports multilingualism.

Following this, the mint's location is specified, referencing the city or region where it is situated and drawing information from a thesaurus that has been developed over the years for MIB. Once again, we see the advantage of participating within the existing installation for monedaiberica.org, avoiding the need for the unnecessary duplication of content.

One of the recently incorporated fields is the one for chronology, which enables us to establish – or in certain instances, re-establish – the start and end dates of coin production activity. These

dates are typically expressed in years, although if more precise information is available from documentation indicating the exact month or day when the workshop commenced or ceased operations, this can also be included.

Additionally, there is a specific field for including a description with as much detail as needed or deemed necessary. Similarly, this field supports multiple languages and can be expanded to accommodate extensive information. Internal annotations, however, are confined to another specific section of the entry and are not intended for publication on the web catalogue. These annotations can encompass any necessary notes helpful to the content creator, serving both their own reference and that of other collaborators engaged in the project at present or in the future.

Finally, the georeferencing field enables us to precisely determine the geographic location of the mint, provided it is known; this information is displayed on an interactive map. For instance, a pinpoint can be placed at the exact location of the mint, or a radius can be marked if the exact location is uncertain. Concerning the mint of Barcelona, its location is clear from the reign of Peter IV of Aragon, as this monarch purchased a building on Flassaders Street in 1349, where all coin production permanently relocated from 1351 until the definitive closure of the mint in the 19th century (Ripoll 2008). However, the location of the medieval mint of Valencia is more ambiguous, and although we assume it would be in the vicinity of La Virgen Square – La Paz Street – San Vicente Street, it cannot be guaranteed that this is the exact location. Therefore, the georeferencing field allows us to specify a broader point or area. In the case of Barcelona, we know that the mint from 1351 onwards was situated on Flassaders Street, but due to the non-permanent and mobile nature of the mint before the second half of the 14th century, we only have records of some buildings rented by the Crown for coin production, while documentation for others is not preserved. Hence, a decision must be made when creating the mint entry to determine its location: the Flassaders building if we choose the mint from 1351 onwards, or the city of Barcelona in general if we do not wish to specify such an exact point. The same applies to Valencia: since the proposed location appears to be that of the mint from the Late Middle Ages or even the Modern Era, and we do not know where the mint of 1247 or 1271 was (which may have been in different locations), the decision can be made to designate Valencia city as the production site without georeferencing a specific location. If its exact location is discovered in the future, thanks to documentation or archaeology, this field could be modified. As the links are stable, these modifications would not affect the relationships or other pages that have directly used this information.

Furthermore, it is possible to include any necessary bibliography, utilising an extensive library established in MIB, as mentioned earlier. This library continues to expand regularly by incorporating articles and books, which are integrated and linked within the system.

Lastly, the entry incorporates relationship fields, crucial for establishing links between mints or with other relevant concepts we may be addressing.

### 4.2. Defining the entry "Valencia Mint": an issue to confront

Given the definitional challenge presented by the concept of a mint, the first task in creating the entry is to clarify what we mean by the "Valencia Mint". It appears evident that there should be a division between the mint of the Muslim period and that of the Christian period following the feudal conquest of the territory, thereby justifying the existence of two distinct concepts. However, we must consider whether it will be necessary to differentiate between the late medieval mint and the modern mint, or even to establish separate entries for the 13th-century workshop and those of the 14th and 15th centuries.

In essence, the system requires a decision between concept division and correlation, or simplification. Both approaches are valid, each with its own advantages and drawbacks. Simplification entails creating a single entity termed "Valencia Medieval Mint", encompassing coinage from James I of Aragon to Ferdinand II of Aragon, spanning 1247 to 1516. This necessitates a comprehensive description detailing Valencia's progression as a minting centre. Should we perceive no significant political, social, economic, or material schism between the Late Middle Ages and the Early Modern era, simplification could extend to encompass the mint's closure in 1748 or even 1810 under the umbrella of the "Valencia Mint". This aligns with the name associated

with the workshop and city since the mid-13th century. It would be distinct from the "Muslim Mint of Valencia" concept, although an alternative might be considered for the project involving Muslim medieval coinage in the Valencian territory, such as "Balansiyah" or "Balansiyah Mint", as employed on nomisma.org.

Division, on the other hand, involves creating distinct concepts, each requiring a more comprehensive set of data to justify its inclusion. For instance, one might consider introducing concepts such as "Feudal Mint of Valencia", "Late Medieval Mint of Valencia", and "Modern Mint of Valencia". All these entries must be interconnected through the fields we've discussed, facilitating stable links for navigation across the various divisions. However, pursuing this option, as mentioned earlier, demands a more detailed dataset, including precise information such as the exact location of James I of Aragon's mint and that of Peter IV of Aragon. The differing locations could serve as arguments favouring concept differentiation. Another consideration could be the use of different metals, such as exclusive billon minting during James I's reign and gold minting during Peter IV's reign.

However, opting for division poses certain challenges. The two main ones we encounter are, firstly, the introduction of new coin types and metals while certain productions continue. In this scenario, we consider the reopening of the mint in the 14th century, during which exclusively florins were coined. These florins continued to be produced throughout the century and into the 15th century, alongside the reintroduction of billon and the beginning of silver coinage. In our opinion, this indicates continuity.

Secondly, the introduction of new techniques and machinery raises an important question: does the concept of the mint change when transitioning from coinage by hammer to production using a roller, flywheel, or any other method, while the physical location remains unchanged? Consider, for instance, the Segovia mint: should we consider separate mints within the same building each time new machinery is introduced? (see Murray 2018). Our view is that no, there is still continuity in the concept, and these changes should be incorporated into its description.

## 5. Conclusions

It is evident that the definition of the mint concept using Dédalo is influenced by specific needs and the volume of available information pertaining to the particular mint in question. Our approach leans towards simplifying entries, aligning with the political and social evolution of the region, which delineates clear historical divisions between accepted periods according to current research. This implies, for now, a singular entry within the Kingdom of Valencia Project, distinctly separating the Islamic mint, designated as the "Balansiyah mint" – following the criterion chosen for nomisma.org – and the mint established from 1247 onwards, marking a stark shift in political, fiscal, and social regimes, accompanied by radical and definitive changes in both the monetary system and currency mass. Hence, the concept of the "Valencia mint" encompasses the mint from its inception in 1247 until its ultimate closure.

Having only one concept simplifies the work and understanding. However, this does not imply that in the future, when the Kingdom of Valencia Project needs to incorporate all Valencian productions from 1516 onward, this entry can be split into two: one for the late medieval period and another for the modern period. This decision must be based on solid criteria that allow for a reasoned differentiation.

Our example, although local and specific, addresses a broader issue concerning the definition of concepts in digital projects, not limited to just mints. It highlights the importance of defining entries for inclusion in digital catalogues, thesauri, or libraries, as these definitions shape the organisation and accessibility of digital content. The Dédalo platform facilitates the establishment of stable relationships and the rearrangement of information and concepts in a collaborative manner. For us, ensuring the establishment of stable links that facilitate understanding the evolution of a mint, for instance, is crucial, as demonstrated in our discussion.

**Bibliography**

Crusafont, M., 2009. Catàleg general de la moneda catalana. Països catalans i Corona catalano-aragonesa (S. V a.C. - s. XX d.C.). Societat Catalana d'Estudis Numismàtics, Barcelona.

Gozalbes, M., Onielfa, J. F., Peña, A., Ripollès, P. P., 2021. El catálogo digital de las monedas antiguas de la Península Ibérica. Congreso CIMED, I Congreso Internacional de Museos y Estrategias Digitales. Editorial Universitat Politècnica de València, Valencia, 535–553.

Mateu y Llopis, F., 1929. La ceca de Valencia y las acuñaciones valencianas de los siglos XIII al XVIII. Valencia.

Murray, G., 2018. El Real Ingenio de la Moneda de Segovia. Guía del monumento y de las acuñaciones en Segovia: desde 30 a.C. hasta 1869. Amigos de la Casa de la Moneda de Segovia, Segovia.

Peña, A., Gozalbes, M., 2021. El sistema de gestión NUMISDATA y los hallazgos monetarios, Actas del XVI Congreso Nacional de Numismática. Tesoros y hallazgos monetarios: protección, estudio y musealización (Barcelona, 28, 29 y 30 de noviembre de 2018). Real Casa de la Moneda – Fábrica Nacional de Moneda y Timbre, Barcelona/Madrid, 153–166.

Petit, R., 1981. Nuestras monedas. Las cecas valencianas. Valencia.

Petit, R., Aledón, J. M., 1983. Catálogo de las monedas valencianas y medallas valencianas de los Reyes de España. Valencia.

Ripoll, M. E., 2008. La Seca o Casa de la Moneda de Barcelona: dels precedents al segle XIX. Institut d'Estudis Catalans: Societat Catalana d'Estudis Numismàtics, Barcelona.

Ripollès, P. P., Gozalbes, M., Frances, D., Sendra, J. A., 2020. La colección numismática Vidal Valle y su publicación digital, in: Francisco Olmos, J. M. de, Retamero, F. (coords.), Homenaje a Josep Pellicer Bru. Asociación Numismática Española, Barcelona, 303–316.

Sánchez, M., 2021. La moneda barcelonesa d'argent en la ciutat de València (ss. XIII-XIV). Estudi del tresor del carrer de la Llibertat. PhD Thesis, Universitat de València, non published.

Sánchez, M., 2022. Evidencias de un área monetaria compartida entre Barcelona y Valencia en los siglos XIII y XIV, a partir de los depósitos monetarios. Revista Numismática Hécate, 9, 194-210.

Sánchez, M., on press. El depòsit monetari del carrer de la Llibertat de València i la moneda grossa d'argent de Barcelona (segles XIII i XIV).

Sendra, J. A., 2008. Las acuñaciones de plata en Valencia durante el reinado de Carlos II. Archivo de Prehistoria Levantina, XXVII, 339–359.

# Roman Provincial Coins Found at Colonia Flavia Scupinorum

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**Abstract:** This article summarises the current available data on the inflow of Roman provincial coins on the archaeological site of Scupi. Colonia Flavia Scupinorum, as one of the largest Roman sites located in the central part of the Balkans near the important crossroads connecting Macedonia with the inner land and the Via Egnatia through the intersection to the Via Militaris, has provided a significant number of coin issues during the last decade's archaeological excavations. Currently, we have a modest part of this quantity available for research, with the ongoing conservation process ending completely in the upcoming years. Despite this, the numismatic material available provides arguments for the development of the monetary economy in Scupi. Therefore, our main aim in this article is to detect the coin circulation of Roman provincial coins as far as possible, including the pseudo-autonomous ones in Scupi. Nevertheless, it must be pointed out that all conclusions made in this article are based on preliminary data.

**Keywords:** Roman provincial coins, Macedonian koinon, Thessalonica, Philippi, Municipium Stobensium.

BulgNJ

Due to its location in the central part of the Balkans and its vicinity to important road intersections, *Colonia Flavia Scupinorum* maintained an easy and intensive circulation of people and legions from different parts of the Roman Empire. So far, this has been evidenced by the epigraphic finds and since recently, it has been evidenced by the numismatic findings as well. Formed by the organised settling of veterans during the time of the Flavian dynasty, *Colonia Flavia Scupinorum* intensively developed and expanded its well positioned territory during the Imperial period. The high-quality life in this important administrative, religious, and transit centre situated at the southernmost position of the province of Moesia Superior is illustrated by the remaining objects such as the theatre; the baths (*thermae*); the basilicas; as well the decorative furniture elements; luxurious pottery; decorations on metal vessels; and medical, pharmaceutical, or cosmetic instruments, etc. (Jovanova, Ončevska-Todorovska 2018). The relatively peaceful period of prosperity during the first centuries of its existence was interrupted from the mid-3rd century and especially towards the end of 4th century, when Scupi was repeatedly ravaged by barbarian incursions and plunders from the north. Its importance as a strategic and military point during the late 4th century was confirmed by the two visits of Theodosius I in AD 379 and in 388during which two imperial edicts were issued (Cod.Theodos VI.30.2; XII. 1. 119), and although Scupi was reinforced as a base of the military unit *pseudo comitatenses Scupenses* under the command of *magister militum per Illyricum* (Not. Dig. Or. IX.43), it was not spared from the destruction caused by the

barbarian invasions that led into profound economic poverty and abandonment in Late antiquity. The coins presented here come from the systematic archaeological excavations conducted in the last two decades on three different sectors of Scupi: the theatre, the central urban zone with the southeastern defensive wall, and the necropolis.

According to the available numismatic evidence, 35 coins of the Macedonian *koinon* can be presented in this article. Apart from five coins which are only recognisable by traces of the Macedonian shield on the reverse,[1] the rest of them can be identified, although they have arrived to us in a quite worn condition. The majority of them, or 16 issues, belong to the first chronological phase (AMNG III, 11–25; Liampi 2005, 891–904; Borić-Brešković, Vojvoda 2018, 19–50) with the inscription ΣΕΒΑΣΤΟΣ ΜΑΚΕΔΟΝΩΝ on the Macedonian shield, of which five coins were issued during the reign of Claudius,[2] fiveduring that of Nero,[3] and six c during the reign of Vespasian.[4] The next chronological phase — marked by the change in inscription to ΚΟΙΝΟΝ ΜΑΚΕΔΟΝΩΝ — can be evidenced by five issues of Domitian with the Macedonian shield on the reverse and three additional coins — one minted in the name of Marcus Aurelius, one in the name of Faustina II, and one from Commodus as a Caesar — with a thunderbolt on the reverse. Out of the five coins of Domitian, three came from cremation graves,[5] and two from the central urban zone. The coin of Faustina II was unearthed in the central urban zone,[6] while the ones of Marcus Aurelius[7] and Commodus[8] come from the zone of the theatre. The next two coins belong to the pseudo-autonomous issues with representation of the head of Alexander III on the obverse and Alexander on horseback prancing right on the reverse, minted during the first half of the third century or probably during the reign of Gordianus III. Both of them were discovered at the necropolis.[9]

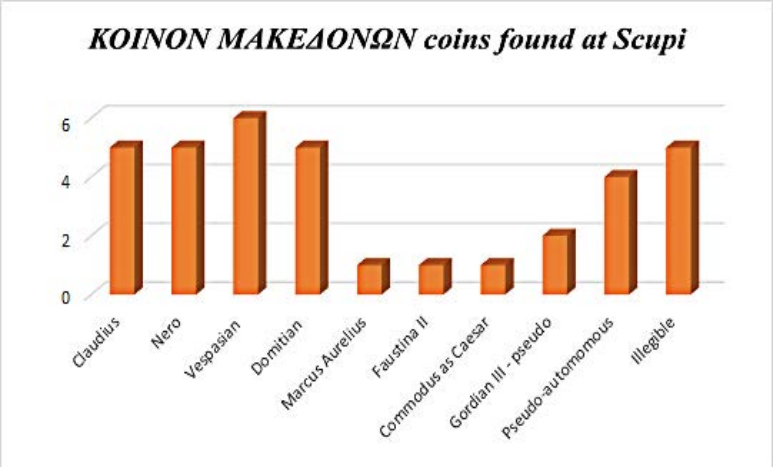


**Fig. 1.**

[1] Cat. nos. 27–31.
[2] Cat. nos. 1–5, all cremation graves.
[3] Cat. nos. 6–10, all cremation graves except cat. no. 6, inhumation grave no. 2883, and cat. no. 9, an isolated find from southeastern wall).
[4] Four coins were unearthed from cremation graves; one from the inhumation grave of a child with grave finds like a mirror, silver bracelet, shells, etc.; and the last one from an inhumation grave together with golden leaves.
[5] Cat. no. 17, 18, 21.
[6] Cat. no. 23.
[7] Cat. no. 22.
[8] Cat. no. 24.
[9] Cat. no. 25, cremation grave no. 2925, cat. no. 26 = inhumation grave no. 3519.

The small pseudo-autonomous denomination with the inscription ΜΑΚΕΔΟΝΩΝ on the Macedonian shield on the reverse has been documented in Scupi with four issues, two of which were discovered at the central urban zone[10] and two at the theatre.[11] These small denomination coins have the representation of Victory walking to left or right on the obverse, which is something they have in common with the majority of the following group of provincial coins found at Scupi.

From the Thessalonica mint 25 issues have been documented, of which there are six coins with the imperial head on the obverse and 19 issues of pseudo-autonomous coins. Two of the pseudo-autonomous coins have a representation of Pan and 17 of Victory on the obverse, while the reverse is the same for all and presents the inscription ΘΕΣΣΑΛΟΝΙΚΕΩΝ within a wreath. These coins are in a quite worn condition, especially the coins with the imperial head — of which five can be attributed to Nero[12] and one to Philip I.[13] Regarding the representation on the reverse of the coins attributed to Nero, one has a Victory on a globe, while all the rest of the coins have the inscription ΘΕΣΣΑΛΟΝΙΚΕΩΝ within a wreath. Five of them have been excavated at the necropolis[14] and one at the theatre.[15] As for the pseudo-autonomous coins, five pieces were found at the necropolis, 13 at the theatre, and one in the central urban zone.

The participation of the colonial issues of Philippi in the monetary circulation in Scupi has been confirmed by two coins with the imperial head: one coin of Vespasian with a statue of Augustus crowned by a statue of Divus Julius with COL AVG IVL [PHILIPP] on the reverse[16] and one coin of Antoninus Pius with emperor being crowned with the same inscription on the reverse,[17] as well as 23 pieces of the pseudo-autonomous type of Victory and the inscription VIC(toria) AVG(usta) on the obverse with the military standards and COHOR(s) PRAE(toria) PHIL(ippiensis) on the reverse. The images of the Roman legions' standards on the reverse were obviously influenced by the military past of the veterans and their descendants taking part in the foundation of the colony Philippi. Although these coins were previously dated to the years of Claudius or Nero (RPC 1, 1651), sufficient arguments for a different dating were given by Sophia Kremydi (Kremydi-Sicilianou 2002, 63–79) on this subject, such as that those coins with the presentation of Victory on a globe belong to the earlier issues that were distributed and used in the eastern provinces in the second half of the 1st century, while the simpler type of Victory upon a base or walking to left or right were minted during the 2nd and 3rd centuries. The Victory/military standard issues discovered at Scupi all belong to the type dated to a later period, i.e. . to the 2nd and 3rd centuries — or, out of the 23 pieces, five coins present Victory upon a base, while 18 coins present Victory walking to left (seven of them have very worn-out features). Based on their place of discovery, these coins have been documented in every excavated part of the archaeological site of Scupi. As the site of the theatre is completely excavated, the majority of them (11 coins) were unearthed there.[18] Eight of them were found at the necropolises,[19] and four in the central urban territory and eastern defensive wall.[20] Their long-time use in the monetary circulation of Scupi is evident because they have arrived to us in quite worn-out condition.

[10] Cat. nos. 32–33.
[11] Cat. nos. 34–35.
[12] Cat. nos. 36–40.
[13] Cat. no. 41.
[14] Cat. no.36 = cremation grave no. 2844; cat. no. 37 = inhumation grave no. 3269; cat. no. 38 = cremation grave no. 2968; cat. no. 40 = inhumation grave no. 87; cat. no. 41 = inhumation grave no. 3598.
[15] Cat. no. 39.
[16] Cat. no. 61.
[17] Cat. no. 62.
[18] Cat. nos. 63-64, 70–71, 76–77, 79–81, 84–85.
[19] Cat. nos. 65, 67–69, 72–73, 82–83.
[20] Cat. nos. 66, 74–75, 78.

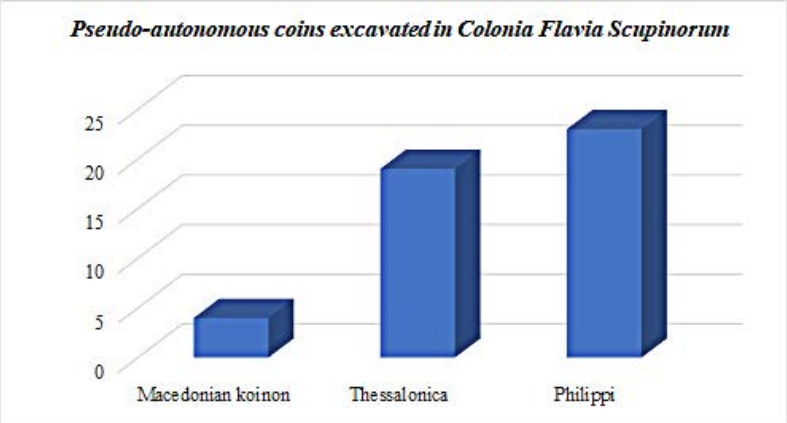


**Fig. 2.**

As for the coinage of *Municipium Stobensium,* out of the numismatic material that has undergone a full conservation effort , we can present only nine coins: two coins of Titus and Domitian, four coins of Trajan, one coin of Septimius Severus, one coin of Julia Domna, and one coin of Caracalla. From the joint issues minted during the Vespasianic period with the laureate bust of Titus and the head of Domitian on the obverse, the first one has a representation of a tetrastyle temple with a statue inside on the reverse,[21] while the second coin has a tetrastyle temple with a globe inside. The coin with the globe inside[22] is preserved quite well, with easily distinctive features, and it was found in the necropolis as an isolated find while burying skeletal material. Contrary to this, the coin with statue inside was part of an inhumation grave[23] of a newborn or a very young child, along with an ornamented bone needle, pottery and a small glass jug. This coin has an intense green patina, and it is difficult to distinguish its features. The four coins of Trajan belong to the type of the laureate head of Trajan on the obverse and a tetrastyle temple with a statue inside. Three of them[24] were part of an inhumation and one was from a cremation burial,[25] and although all of them were found together with rich grave finds,[26] they have unfortunately arrived to us with worn-out features. Regarding the issue minted in the name of Septimius Severus[27] with laureate bust of Septimius on the obverse and Victory stepping to the left on the reverse, it was discovered in a cremation grave, where — among other gifts — there were also golden earrings. From Julia Domna, there is only one coin discovered at Scupi and, apart from all the other coins of Stobi unearthed at the necropolis, this coin was discovered at the theatre.[28] It belongs to the frequent type of Victory stepping to the left on the reverse. The last issue from the Stobi mint is the coin of Caracalla with the representation of a seated Mercury (Hermes) on a rock, turned to the left. This coin was discovered in an inhumation grave.[29]

The participation of the provincial issues of Pautalia in the monetary circulation in Scupi is evidenced by three pieces from the available numismatical material. One is a worn-out coin discovered at the theatre, minted during the reign of Antoninus Pius with three nymphs[30] on the

[21] Cat. no. 87.
[22] Cat no. 86.
[23] Cat no. 87, grave no. 2781.
[24] Cat. nos. 88–90.
[25] Cat. no. 91.
[26] Cat. no. 88; the deceased had golden leaves on his forehead from the skull.
[27] Cat. no. 92.
[28] Cat . no. 93.
[29] Cat. no. 94.
[30] Cat. no. 95.

reverse; the second, issued during the reign of Commodus, is of the coiled serpent type[31] and was discovered in the central urban zone; the final coin, belonging to Caracalla with a beautiful reverse presentation of Thanatos leaning on a torch set on an altar,[32] was discovered at the theatre.

One interesting issue belonging to the coinage of Corcyra was also unearthed at the south-eastern necropolis of Scupi.[33] This pseudo-autonomous issue, initially dated by Gadner and Head to AD 48–138 (BMC, p. 153–158; HN, p. 328; Calomino 2014, 429–462) and later dated to the Antonine period or during the 2nd century (RPC IV, 4598; Calomino 2014, 429–462), belongs to one larger coin production with an iconographic presentation of local variants of traditional divinities worshipped on the island. This coin with the inscriptions AΓPEYC/ ZEYC KACIOC presents Agreus standing towards left and probably holding cornucopia on the obverse, while Zeus Kasios is seated and holding a long sceptre on the reverse.

Finally, the provincial coins so far evidenced in Scupi with only one example each are as follows: one pseudo-autonomous issue of Byzantion (Thrace) from the second half of the 2nd century with the head of Hermes on the obverse and a winged caduceus on the reverse excavated from the zone of the theatre;[34] one issue of Heraclea Pontica (Bythinia) minted during the reign of Gordian III with the presentation of Heracles conducting Cerberus to the right on the reverse, found at the central urban zone;[35] one issue coming from the mint of Cotiaeum (Phrygia), minted under Maximinus with clasped hands on the reverse, found at the necropolis;[36] and a coin from the mint of Alexandria Troas (Cyzicus) with Marcus Aurelius on the obverse and a horse grazing to right,[37] found at the necropolis. The last one is an issue from the rule of Tiberius in the name of the duumvir L. Rusticelius Basterna and comes from a cremation grave.[38] Although it is attributed to Dium by Sestini (Sestini, 101–103) and later accepted by Imhoof-Blumer (Imhoof-Blumer 1883, 74–75) and Gaebler (Gaebler 1926, 128–136), this attribution is not favoured by the excavation finds from the site, as was pointed out by Kremydi (Kremydi 1996, 286–287). Nevertheless, I have classified this coin under Dium or Pella here, until a further mint attribution is precise.

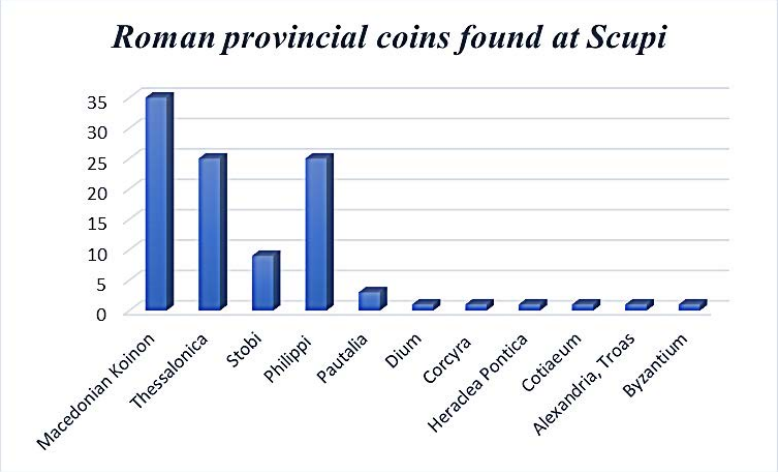


**Fig. 3.**

[31] Cat. no. 96.
[32] Cat. no. 97.
[33] Cat. no. 98, grave no. 854.
[34] Cat. no. 100.
[35] Cat. no. 103.
[36] Cat. no. 102 (coin evidenced first by Sanja Bitrak in Museum Inventory Book)
[37] Cat. no. 101.
[38] Cat. no. 99.

From all of the evidence presented above, it is clear that the numismatic material available for research at this moment mostly comes from the 2nd century AD, which confirms the development of the monetary economy in *Colonia Flavia Scupinorum* during that period. The presence of coins that derive from the Macedonian mints of Thessalonica, Philippi, and the Macedonian *koinon* (which were minted in Beroia, see Liampi 2005, 891–904) shows us that they were probably the mints with the largest production in the region during the first two centuries. With its favourable position next to the main road and River Axios, Scupi was very easily reachable, especially for the small denomination pseudo-autonomous coins from Thessalonica and Philippi which prevail according to the present numismatic evidence from Scupi. These coins with local Macedonian iconographic themes that appeared to have local significance at first sight were part of a broader monetary circulation. Their prevalence in Scupi over the other Roman provincial coins is probably due to their small denomination and their demand for daily transactions. Although it was the officials of each colony who decided to mint the coins and who chose the images that appeared on them (Daubner 2014, 109–119), the similar iconographic representations of winged Victory on pseudo-autonomous issues of Thessalonica,the Macedonian *koinon,* and Philippi confirms the acceptance and recognition of this monetary type in wider circulation during the second half of the 2nd century to the beginning of the 3rd century. The abundance of local iconographic themes is also seen on the coins of Stobi and Pautalia. Apart from the Victory coin type, Stobi with its temple type (Borić-Brešković, Vojvoda 2017, 7–31) and Pautalia in Thrace with the health cult coin type (Grigorova-Gencheva, Grozdanova 2021, 477—489) — recognisable through the designs of the snake and three nymphs — also participated actively in this monetary circulation. However, their share in this circulation is yet to be verified by the upcoming results from the conservation process.

It is evident that the dominant participation of the coins from the Macedonian mints in the monetary circulation of Scupi is due not only to the proximity of roads which allowed strong trade development and army movements, but also to the migration of common people from the south, which is attested by more numerous tombstones from the necropolis engraved both in Latin and Greek.

Furthermore, the number of the Roman provincial coins in Scupi coming from Asia Minor (Bithynia, Phrygia, etc.) during the first two centuries is minor compared to the number of coins from the Macedonian and Thracian mints, which would drastically change with the influx of Nicaean coins during the reign of Severus Alexander and Gordian III (Sheldarova Vasileva 2022, 305–330). As it was already suggested in literature, this strong influx of Nicaean coins on the Balkans happened right after the closure of the mint of Stobi, filling the lack of small bronze coins on the market (Borić-Brešković 2011, 415). Evidently, the increase in the number of troops on the military route to and from the east (Calomino 2019, 131–160) also enlarged the quantity of these coins in the monetary circulation in Scupi. Although presented by one issue, the coins of Byzantium, Heraclea Pontica, Alexandria Troas, and Cotiaeum show the diversity of monetary circulation in Scupi during the 2nd and the 3rd centuries and enlighten our expectations for their possible enlargement with the completion of the conservation process.

## Catalogue of Coins

The coins are described by type, followed by references of online Roman Provincial Coins or published scientific catalogues and private collections. After that comes the metal, weight, diameter, die-axis (except for the issues with worn features where it is difficult to determine), place of discovery, and inventory number of the Collection of the Museum of the city of Skopje.

### MACEDONIAN KOINON

**Claudius (AD 41–54)**

Obverse: TI ΚΛΑΥΔΙΟΣ ΚΑΙΣΑΡ, bare head of emperor, left.

Reverse: ΣΕΒΑΣΤΟΣ ΜΑΚΕΔΟΝΩΝ, Macedonian shield.
*RPC, I, 1612, AMNG 238–9, BMC 145.* Šeldarov *Coll. 727.*

1. AE, 8.1 g, 24 mm, grave no. 3274, inv. no. 12246.
2. AE, 11.2 g, 27 mm, 12h, grave no. 2828, inv. no. 7462.
3. AE, 9.3 g, 24 mm, grave no. 3070, inv. no. 10070.
4. AE, 9.7 g, 24 mm, 6h, grave no. 3541, inv.no. 10656.
5. AE, 9.7 g, 23 mm, grave no. 3031, inv.no. 10211.

**Nero (AD 54–68)**
Obverse: ΝΕΡΩΝ ΚΑΙΣΑΡ, young bare head of emperor, left.
Reverse: ΣΕΒΑΣΤΟΣ ΜΑΚΕΔΟΝΩΝ, Macedonian shield.
*RPC, I, 1614, AMNG 242, BMC 146.* Šeldarov *Coll. 728.*

6. AE, 7.9 g, 22 mm, grave no. 2883, inv. no. 9698.
7. AE, 6 g, 25 mm, 6h, grave no. 2841, inv. no. 7447.
8. AE, 9.5 g, 25 mm, 4h, grave no. 2231, inv. no. 8703.
9. AE, 8.3 g, 24 mm, 12h, southeastern defensive wall, inv. no. 28895.
10. AE, 6.81 g, 23 mm, 6h, grave no. 121, inv. no. 31.

**Vespasian (AD 69–79**)
Obverse: ΑΥΤΟΚΡΑΤΩΡ ΚΑΙΣΑΡ ΟΥΕΣΠΑΣΙΑΝΟΣ, laureate head of Vespasian, left.
Reverse: ΣΕΒΑΣΤΟΣ ΜΑΚΕΔΟΝΩΝ, Macedonian shield.
*RPC, II, 333, AMNG 248–9.* Šeldarov *Coll. 730.*

11. AE, 6.9 g, 23 mm, grave no. 3204, inv. no. 10488.
12. AE, 5.6 g, 22 mm, grave no. 3580, inv. no. 10887.
13. AE, 10.4 g, 23 mm, 6h, grave no. 2825, inv. no. 7459.
14. AE, 9.5 g, 23 mm, 6h, grave no. 2871, inv. no. 9621.
15. AE, 7.4 g, 25 mm, grave no. 2784, inv. no. 7304.
16. AE, 3.6 g, 25 mm, grave no. 2875, inv. no. 9551.

**Domitian (AD 81–96)**
Obverse: ΑΥΤ ΚΑΙΣΑΡ ΔΟΜΙΤΑΙΝΟΣ ΣΕΒ, laureate head of Domitian, right.
Reverse: ΚΟΙΝΟΝ ΜΑΚΕΔΟΝΩΝ, Macedonian shield.
*RPC II, 336, AMNG 252.* Šeldarov *Coll. 731.*

17. AE, 8 g, 23 mm, 4h, grave no. 3341, inv. no. 12371.
18. AE, 9.6 g, 23 mm, 6h, grave no. 3273, inv. no. 12145
19. AE, 6.35 g, 23 mm, 6h, central urban zone, inv. no. 2
20. AE, 6.83 g, 23 mm, 12h, central urban zone, inv. no. 3
21. AE, 10.24 g, 24 mm, 6h, grave.no. 143, inv. no. 29

**Marcus Aurelius (AD 161–180)**
Obverse: ΚΑΙCΑΡ ΑΝΤΩΝΙΝΟC, laureate head of Marcus Aurelius, right.
Reverse: ΚΟΙΝΟΝ ΜΑΚΕΔΟΝΩΝ, winged thunderbolt.
*RPC, IV.1, 4277, AMNG 272.*

22. AE, 8.24 g, 22 mm, 2h, theatre, inv. no. 621/15.

**Faustina II (AD 161–175)**
Obverse: ΦAVCTEINA CEBACTH, draped bust of Faustina II, right.
Reverse: KOINON MAKEΔONΩN, winged thunderbolt.
*RPC, IV.1, 4292, AMNG, 285.*
23. AE, 10.9 g, 25 mm, 6h, central urban zone, inv. no. 26349.

**Commodus as Caesar (AD 175–180)**
Obverse: KAICAP KOMODOC, bare headed bust of youthful Commodus, right.
Reverse: KOINON MAKEΔONΩN, winged thunderbolt between star and crescent.
*RPC, IV.1, 4293, AMNG 286.*
24. AE, 11.14 g, 23 mm, 6h, theatre, inv. no. 3100.

**Gordian III (AD 238–244)**
Obverse: ΑΛΕΞΑΝΔΡΟΥ, diademed head of Alexander the Great with flowing hair to right.
Reverse: KOINON MAKEΔONΩN BN, horseman galloping right, holding spear in r. hand.
RPC, VII.2, 152–153.
25. AE, 13.9 g, 28 mm, 8h, grave no. 2925, inv. no. 9682.

Obverse: ΑΛΕΞΑΝΔΡΟΥ, head of Alexander the Great with lion skin to right.
Reverse: …..ΚΕΔΟΝΩΝ….., horseman galloping right.
*RPC, VII.2, 219?*
26. AE, 13.1 g, 24 mm, 12h, grave no. 3519, inv. no. 10670.

**Illegible coins of Macedonian Koinon (only traces of Macedonian shield on reverse)**
27. AE, 6.8 g, 23 mm, grave no. 3011, inv. no. 9888.
28. AE, 5.3 g, 23 mm, grave no. 3590, inv. no. 10784.
29. AE, 7.6 g, 21 mm, necropolis — isolate find, inv. no. 9075.
30. AE, 5.9 g, 23 mm, grave no. 2714, inv. no. 9712.
31. AE, 7.2 g, 22 mm, grave no. 3063, inv. no. 10202.

**“Pseudo-autonomous” Issues of the Macedonian Koinon**
Obverse: Victory standing/advancing to right.
Reverse: MAKEΔONΩN, Macedonian shield.
RPC, I, 1623.
32. AE, 2.8 g, 14 mm, central urban zone, inv. no. 195/19.
33. AE, 1.8 g, 12 mm, central urban zone, inv.n o. 172/19.

Obverse: Victory standing/advancing to left.
Reverse: MAKEΔONΩN, Macedonian shield.
*RPC, I, 1621*. Šeldarov *Coll. 725.*
34. AE, 3.24 g, 16 mm, theatre, inv. no. 613/15.
35. AE, 2.97 g, 15 mm, theatre, inv. no. 3715/14.

**THESSALONICA**

**Nero (AD 54–68)**

Obverse: ΚΑΙΣΑΡ ΝΕΡΟΝ, bare head of Nero, left
Reverse: ΘΕCCΑΛΟΝΙΚΗ, Nike on globe, left.
*RPC, I, 1593, Touratsoglou, Nero 27–30.*

36. AE, 16.5 g, 28 mm, 6h, grave no. 2844, inv. no. 7483.

Obverse: ΝΕΡΩΝ ΚΑΙΣΑΡ, bare head of Nero, left.
Reverse: ΘΕΣΣΑ-ΛΟΝΙΚΕ-ΩΝ legend in three lines, within wreath.
RPC, I, 1594. Touratsoglou, Nero 14–16.

37. AE, 9.6 g, 22 mm, 12h, grave no. 3269, inv. no. 12150.

Obverse: ΝΕΡΩΝ ΣΕΒΑΣΤΟΣ ΚΑΙΣΑΡ, bare head of Nero, left.
Reverse: ΘΕΣΣΑ-ΛΟΝΙΚΕ-ΩΝ legend in three lines within wreath.
RPC, I, 1603, Touratsoglou Nero 21–26.

38. AE, 9.7 g, 23 mm, 6h. grave no. 2968, inv. no. 9949.
39. AE, 8 g, 21 mm, 12h, theatre inv. no. 4626/14.

Obverse: ΝΕΡΩΝ ΚΑΙΣΑΡ, radiate? head of Nero, right.
Reverse: ΘΕΣΣΑ-ΛΟΝΙΚΕ-ΩΝ legend in three lines, within wreath.
RPC, I, 1600. Touratsoglou, Nero 54–59.

40. AE, 9 g, 22 mm, 1h, grave no. 87, inv. no. 61.

**Philip I (AD 244–249)**

Obverse: ΑΥ Κ Μ ΙΟΥΛΙΟC ΦΙΛΙΠΠΟC, laureate, draped, and cuirassed bust of Philip I, right.
Reverse: ΘΕCCΑΛΟΝΙΚΕΩΝ ΝΕΩΚ ΠΥΘΙΑ, B, Kabeiros and Apollo standing facing each other.
RPC, VIII (ID 69406), Touratsoglou, 17.

41. AE, 11.1 g, 26 mm, 4h, grave no. 3598, inv. no. 11118.

**"Pseudo-autonomous" Issues of Thessalonica**

Obverse: Pan standing left.
Reverse: ΘΕC-CΑΛΟ-ΝΙΚΕ- ωΝ, within wreath.
*RIC, III, 623.*

42. AE, 3.5 g, 14 mm, 6h, theatre, inv. no. 337/14.
43. AE, 4.05 g, 15 mm, 4h, theatre, inv. no. 2809/14.

Obverse: Victory walking to right.
Reverse: ΘΕCCΑΛΟΝΙΚΕΩΝ, within wreath.
*Touratsoglou, Pseudo.II, G, 4–5.*

44. AE, 1.59 g, 13 mm, 12h, theatre, inv. no. 5119/14.
45. AE, 2.73 g, 14 mm, 10h, theatre, inv. no. 2863/14.
46. AE, 2.57 g, 14 mm, 2h. theatre, inv. no. 2593/14.
47. AE, 1.85 g, 14 mm, 6h, theatre, inv. n o. 2275/14 (worn-out features).

48. AE, 1.5 g, 12 mm, 2h, theatre, inv. no. 3713/14.
49. AE, 1.93 g, 16 mm, 12h, theatre, inv. no. 390/15.
50. AE, 2.38 g, 12 mm, 12h, theatre, inv. no. 3822/14.
51. AE, 1.89 g, 13 mm, 3h, theatre, inv. no. 3945/14.
52. AE, 1.86 g, 14 mm, 6h, theatre, inv. no. 1237/14.
53. AE, 1.96 g, 15 mm, 2h, theatre, inv.n o. 5943/14.
54. AE, 1.86 g, 13 mm, 12h, theatre, inv. no. 4403/14 (worn-out features).
55. AE, 2.16 g, 14 mm, 12h, central urban zone, inv. no. 14521.
56. AE, 1.5 g, 12 mm, 6h, grave no.3128, inv. no. 12070 (worn-out features).
57. AE, 2.5 g, 14 mm, 5h, grave no. 3586, inv. no. 11751 (worn-out features).
58. AE, 3.1 g, 15 mm, 7h, grave no. 3596, inv. no. 10746 (worn-out features).

Obverse: Victory walking to left.
Reverse: ΘΕCCΑΛΟΝΙΚΕΩΝ, within wreath.
*RPC, II, 326*. Šeldarov *Coll. 334*.

59. AE, 3.7 g, 15 mm, 12h, grave no. 846, inv. no. 1700 (worn-out features).
60. AE, 3.06 g, 17 mm, 6h, grave no. 882, inv. no. 1725 (worn-out features).

## PHILIPPI

**Vespasian (AD 69–79)**
Obverse: IMP CAE VESPASIANVS AVG COS III; bare head of Vespasian, left.
Reverse: COL AVG IVL [PHILIPP], Augustus in military dress crowned by Divus Julius wearing toga.
*RPC, II, 343A*.

61. AE, 9.8 g, 25 mm, 12h, grave no. 845, inv. no. 1698.

**Antoninus Pius (AD 138–161)**
Obverse: [ANTONINVS] AVG PIVS P P TR P [COS IIII]; laureate head of Antoninus, right.
Reverse: COL AVG IVL PHIL, the emperor on platform to left, crowned by female figure from behind, [DIVVS AVG] inscribed inside platform.
*RPC, IV.1, 9401*.

62. AE, 4.5g, 22 mm, 6h, grave no. 3155, inv. no. 10298.

**"Pseudo-autonomous" Issues of Philippi**
Obverse: VIC AVG, Victory on a base to left.
Reverse: COHOR PRAE PHIL, military standards.
*RPC, I, 1651*.

63. AE, 6.3 g, 22 mm, 2h, theatre, inv. no. 422/14.
64. AE, 3.2 g, 17 mm, 12h, theatre, inv. no. 3059/14.
65. AE, 5.7 g, 20 mm, 7h, necropolis — isolate find, inv. no. 9447.
66. AE, 4.2 g, 18 mm, 6h, central urban zone, inv. no. 23471.
67. AE, 4.1 g, 18 mm, 4h, grave no. 154, inv. no. 80.

Obverse: VIC AVG, Victory walking to left.
Reverse: COHOR PRAE PHIL, military standards.

68. AE, 3.09 g, 16 mm, 12h, grave no. 856, inv. no. 1715.
69. AE, 3.08g, 18 mm, 11h, grave no. 728, inv. no. 1430.
70. AE, 2.63 g, 16 mm, 12h, theatre, inv. no. 2647/14.
71. AE, 3.7 g, 16 mm, 11h. theatre, inv. no. 4970/14.
72. AE, 2.2 g, 18 mm, 9h, grave no. 3276, inv. no. 12272.
73. AE, 3.6 g, 18 mm, 6h, grave no. 3276, inv. no. 12273.
74. AE, 4.4 g, 19 mm, 6h, central urban zone, inv. no. 25762.
75. AE, 2.7 g, 15 mm, 6h, se defensive wall, inv. no. 25639.
76. AE, 4.1g, 18 mm, 6h, theatre, inv. no. 2860/14.
77. AE, 2.8 g, 17 mm, 6h, theatre, inv. no.2859/14.
78. AE, 3.2 g, 18 mm, 6h, central urban zone, inv. no. 131.
79. AE, 4.83 g, 18 mm, 12h, theatre, inv. no. 4948/14 (worn-out features).
80. AE, 4.86 g, 20 mm, 12h, theatre, inv. no. 682/14 (worn-out features).
81. AE, 2.50g, 14 mm, 2h, theatre, inv. no. 127/15 (worn-out features).
82. AE, 1.5 g, 15 mm, 4h. grave no. 2829, inv. no.7466 (worn-out features).
83. AE, 3 g, 19 mm, 6h, grave no. 3634, inv. no.11126 (worn-out features).
84. AE, 4.3 g, 19 mm, 12h, theatre, inv. no. 188/13 (worn-out features).
85. AE, 2.66 g, 16 mm, 6 h. theatre, inv. no.1631/15 (worn-out features).

**MUNICIPIUM STOBENSIUM**

**Titus and Domitian under Vespasian**

Obverse: T IMP DOM CAES, laureate head of Titus right, facing bare head of Domitian to left.

Reverse: MVN STOB, tetrastyle temple with dot or globe within.

*RPC II, 312,* Josifovski, 31–39, *Šeldarov* Coll. 179.

86. AE, 8.9 g, 23 mm, 1h, isolated find from the necropolis, inv. no. 897/21.

Obverse: T CAESAR IMP DOMITIANVS CAESAR, laureate and draped bust of Titus right facing bare head of Domitian to left.

Reverse: MVNICIPI STOBENSIVM, tetrastyle temple with figure standing within.

*RPC, II, 311. Josifovski, 14–30,* Šeldarov *Coll. 178.*

87. AE, 7.9 g, 24 mm, 7h, grave no. 2781, inv. no. 7349.

**Trajan (AD 98–117)**

Obverse: [IMP CAES NERVA TRAIAN AVG GERM P M TR P COS], laureate head right.

Reverse: MVNICIPI STOBIENSVM (from below), tetrastyle temple with figure standing within.

*RPC, III, 600, Josifovski, 47–68.*

88. AE, 6.6g, 22 mm, 6h, grave no. 2461, inv. no. 8868.
89. AE, 6.7g. 23 mm, 6h, grave no. 3167, inv. no. 10340.
90. AE, 6.02g, 23 mm, 6h, grave no. 2450, inv. no. 8914.
91. AE, 6.06 g, 24 mm, 4h, grave no.2870, inv. no. 9548.

**Septimius Severus (AD 193–211)**

Obverse: [SEVE]RVS PIVS AVG, laureate, cuirassed, draped bust of S. Severus right.
Reverse: STOBE – MVNIC, Victory walking to left, holding wreath and palm branch.
Josifovski, 139–140, Kuzmanović Coll. 251–252.

92. AE, 6.89 g, 27 mm, 2h, grave no. 2964, inv. no. 9954.

**Iulia Domna (AD 193–211)**
Obverse: AVGVSTA IVLIA, draped bust of Domna right.
Reverse: MVNICI STOBEN, Victory walking left, holding wreath and palm branch.
*Josifovski, 154, Kuzmanović Coll, 336, Scupi Theater, 39.*

93. AE, 6.97 g, 22 mm, 8h, theatre, inv. no. 5219/14.

**Caracalla (AD 198–217)**
Obverse: M AVRE ANTONI, laureate bust of Caracalla right.
Reverse: STOBE-MVNIC, Mercury seated on a rock, to left, holding caduceus.
*Josifovski, 295,* Šeldarov *Coll. 221.*

94. AE, 2.97 g, 19 mm, 2h, grave no. 2886, inv. no. 9556.

**PAUTALIA**

**Antoninus Pius (138–161 AD)**
Obverse: AVT KAICAP ANTΩNINOC, laureate draped bust right.
Reverse: ΠAYTAΛIΩTΩN, the three Charites, all standing.
RPC, IV.1, 8760.

95. AE, 3.69g, 17mm, 1h, theatre, inv.no. 1385/14.

**Commodus (177–192 AD)**
Obverse: AVT KAI KOMOΔO, laureate head right.
Reverse: [OYΛ]ΠIAC ΠAYTAΛIAC, coiled serpent.
RPC, IV.1, 8934.

96. AE, 3.9g, 20mm, 6h. central urban zone, inv.no. 14283.

**Caracalla (AD 198–217)**
Obverse: AY K M [....] ANTΩNINOC, laureate head right.
Reverse: OYΛΠIAC ΠAYTAΛIAC, winged Thanatos, leaning on torch set on altar to right.
RPC –, BMC–

97. AE, 4.4 g, 20 mm, 6h, theatre, inv. no. 116/16.

**CORCYRA mint during the Antonines**

Obverse: AΓPEYC, Agreus standing left, holding cornucopia.
Reverse: ZEYC KACIOC, Zeus Kasios seated left, holding sceptre.
*RPC, IV.1, 4597.*

98. AE, 4.8 g, 18 mm, 12h, grave no. 854, inv. no. 1773.

**DIUM or PELLA?**

**Tiberius (AD 14–37)**

Obverse: T CAESAR AVG F AVGVSTVS, bare head of Tiberius, right.

Reverse: P BAEBIVS P F L RVSTICELVS BASTERNA IIVIR QVINQ D D.

*RPC, I, 1537*.

99. AE, 7.1 g, 21 mm, 11h, grave no. 169, inv. no. 88.

**BYZANTIUM**

Obverse: Head of Hermes to right.

Reverse: BYZANTIΩN, winged caduceus.

*RPC, IV.1, 1932. Scupi Theater, 2*.

100. AE, 3.4 g. 17 mm, 8h, theatre, inv. no. 4065/14.

**ALEXANDRIA TROAS**

**Commodus (AD 177–192)**

Obverse: IMP CAI M AVR COMMOD AVG, laureate head of Commodus right.

Reverse: COL AVG TROAD, horse grazing right.

*RPC, IV.2, 11703*.

101. AE, 5.2 g, 24 mm, 2h, grave no. 2392, inv. no. 8743.

**COTIAEUM**

**Maximinus (AD 235–238)**

Obverse: Γ IOV OVH MAΞIMEINOC AVΓ, laureate, draped, and cuirassed bust of Maximinus right.

Reverse: KOTI–AEΩ[N], clasped hands.

*RPC, VI, 5757*.

102. AE, 3.4 g. 19 mm, 12h, grave no. 2703, inv. no. 7246.

**HERACLEA PONTICA**

**Gordian III (AD 238–244)**

Obverse: M ANT ΓORΔIANOC AVΓ, laureate and cuirassed bust of Gordian III right.

Reverse: HPAKΛEΩTAN ΠONTO, Heracles advancing right, pulling Cerberus behind him.

RPC, VII.2, 2084.

103. AE, 20.5 g. 36 mm, 8h, central urban zone, inv. no. 635.

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**Bibliography**

Cod.Theod.: Theodosiani libri XVI cum constitutionibus surmondialis, ed. Th.Momsen, Berolini 1905.

Not.Dig.: Notitia Dignitatum accedunt Notitia urbis Constantinopolitanae et laterculi provinciarum (ed. by O. Seek) Berolini 1876.

Sestini D., 1796. Descriptio numorum veterum ex museis Ainslie, Bellini, Bondacca, Borgia ... cum multis iconibus nec non animaduersiones in opus Eckhelianum cui titulus doctrina numorum veterum, Lipsiae.

Calomino, D., 2014. The Coinage of Corcyra Under the Severans, Revue Numismatique, 429–462.

Calomino, D., 2019. Supplies for the Army: Bithynian Coins in the Balkans in the 3rd Century AD, in: Schuler, C., Haensch, R., Bönisch-Meyer, S., (eds.) Chiron. Berlin, Boston: De Gruyter, 131–160.

Borić-Brešković, B., 2011. Coin Hoard of the Stobi Mint Found in South Serbia, Zbornik Narodnog Muzeja, 20–1, 411–437.

Borić-Brešković, B., Vojvoda, M., 2017. Coins of the Municipium Stobi from the Necropolises of Viminacium – Više grobalja and Pećine, Numizmatičar 35, 7–31.

Borić-Brešković, B., Vojvoda, M., 2018. Macedonian Koinon, Roman Provincial Coins from the Collection of the National Museum in Belgrade and from the Southern Necropoles of Viminacium, Numizmatičar 36, 19–50.

Daubner, F., 2014. On the Coin Iconography of Roman Colonies in Macedonia, in: Elkins N. T., and Krmnicek, S., (eds.), Art in the Round. New Approaches to Ancient Coin Iconography, Tübinger Archäologische Forschungen 16. Rahden/Westf.: Marie Leidorf, 2014, 109–119.

Imhoof-Blumer, F., 1883. Monnaies Grecques, Amsterdam.

Gaebler, H., 1926. Zur Münzkunde Makedoniens VII, Zeitschrift für Numismatik, 111–141.

Gligorova–Gencheva, V., and Grozdanova L., The Health Cult in Pautalia: Some Key Aspects of the City Coinage as Primary Source on the Subject in: Peter U., and Stolba V.F., (eds.), Thrace – Local Coinage and Regional Identity (Berlin Studies of the Ancient World, 77). Berlin: Edition Topoi 2021, 477–489.

Jovanova, L., and Ončevska-Todorovska M., 2018. SCUPI, Sector Southeastern Defensive

Wall and Thermae - Atrium Basilica Complex, Skopje.

Josifovski, P., 2001. Roman Mint of Stobi, Narodna Banka na Republika Makedonija.

Josifovski, P. 2010. Kolekcija Kuzmanović, Makedonski numizmatički kolekcii–edicija, Skopje.

Kremydi-Sicilianou, S., 1996. The Coinage of the Roman Colony of Dion, Biblioteca 4, Athens.

Kremydi-Sicilianou, S., 2002. Victoria Augusta on Macedonian Coins. Remarks on Dating and Interpretation. Tekmeria, 7, 63–84.

Liampi, K., 2005. Die Münzprägung des makedonischen Koinon in der Kaiserzeit in : Alfaro, C., Marcos, P., Otero, C., (eds.) XIII Congreso Internacional de Numismática – Madrid 2003-Actas, Ministerio de Cultura, Madrid, 891–904.

Miloševski, V., and Lilčić G., 2017. Overview of the Numismatic Material from the Theatre

in Skupi (Research 2013-2016), In: Jakimovski, A. (ed.), Roman Theatre Scupi,

Skopje, 419–470.

Touratsouglou, I., 1988. Die Münzstätte von Thessaloniki in der Römischen Kaiserzeit, Walter de Gruyter, Berlin-New York.

Šeldarov, N., 2003. Šeldarov Collection, Macedonia and Paeonia, Narodna Banka na Republika Makedonija.

# NUMMI DIGITALI: a Database Online for the Enhancement of the Numismatic Collection of the A. Salinas Archaeological Museum in Palermo

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**Abstract:** NUMMI DIGITALI is a project which, thanks to the close interrelation between numismatic-archaeological methodologies and the IT approach, aims to enhance the numismatic collection of the Regional Archaeological Museum A. Salinas of Palermo. The main objectives of the project were completed and involved: 1). the creation of a digital database (https://nummidigitali.it/), in open format, which was aligned with the national cataloguing standards of ICCD of the Ministry of Culture (MiC) and the methodological guidelines of the National Plan for the Digitisation of Cultural Heritage (PND), in order to make the data interoperable and shareable, according to the LOD paradigm; 2) the connection of the database with the web through a front-end that guarantees accessibility to the external public and therefore real use through the potential offered by ICT; 3) the activation of interactive communication processes through high resolution images and 3D renderings equipped with points of interest with references to hypertexts and/or multimedia.

**Keywords:** Digital numismatic, Database, A. Salinas Archaeological Museum in Palermo, Digital 3D models, XRF spectroscopy.

## 1. The project NUMMI DIGITALI: a database online for the coin collection of the Salinas Museum

NUMMI DIGITALI is a project aimed at the digitisation of the numismatic collection of the A. Salinas Archaeological Museum of Palermo[1] to promote its study and improve its management and enhancement.

The project development was born in 2022 as part of a PON Research and Innovation 2014–2020 funding to support the research activities of the numismatics chair of the University of Palermo, coordinated by the writer, the scientific curator of the project (Sole 2022, 539–547). The project has currently received funding from the University of Palermo as part of the Eurostart 2024 project.[2] The main partners of NUMMI DIGITALI are the Regional Archaeological Museum A. Salinas in Palermo, which keeps the numismatic collection being valorised and which supervises the project, the Webgenesys S.p.A[3] system integrator, which took care of the technological coordination,[4] and the Central Institute for Cataloguing and Documentation (ICCD) of the Ministry of Culture (MiC), which oversaw the validation of the Scheda NU + (NU + data sheet) and led the preparation of the database for the increase of the national SIGECweb database and the sharing of data according to the Linked Open Data (LOD) paradigm.[5] Furthermore, during the develop-

[1] https://www2.regione.sicilia.it/bbccaa/salinas/

[2] The project is part of the objectives of my activities as a researcher in Numismatics (ARCH-01/B) at the Department of "Cultures and Society" of the University of Palermo. It follows that "this work was funded by the European Union – NextGenerationEU – MUR funds D.M. 737/2021 – research project NUMMI DIGITALI towards Europe'

[3] https://www.webgenesys.it/

[4] My thanks go to Elisa Chiara Portale, Full Professor of Classical Archaeology of the University of Palermo, responsible for supervising the development of the project; to Giuseppe Parello, director of the Regional Archaeological Museum A. Salinas of Palermo, for the availability with which it accepted the project to valorise the numismatic heritage of the Salinas and supervising it in collaboration with Elena Pezzini, the official archaeologist of the Salinas Museum, to whom I am grateful for having facilitated in every way my work. Finally, special thanks go to Webgenesys S.p.A. and Giulio Hassan, Business Development Director, and Massimiliano Perri, Senior Presale & Program Manager, for the professionalism, dedication, and attention with which they worked to take care of the technological and IT aspects of the database.

[5] The Scheda NU is a set of suggested field names for recording numismatic information, based on the ICCD cataloguing standards. The Scheda NU+ is the implemented version, developed during the NUMMI DIGITALI project. Similar is the Numismatic Description Standard (NUDS) proposed by the American Nu-

ment phase, we made use of the precious collaboration of the Institute for Chemical-Physical Processes (IPCF) of the CNR of Messina,[6] responsible for the experiments and creation of the 3D models; of the Department of Chemical and Biological Sciences and Technologies Pharmaceuticals (STEBICEF) of the University of Palermo,[7] which carried out the metallographic analyses, and of the Inventory, Cataloguing and Documentation Centre (CRICD) of the Sicily Region, which offered its support as an intermediary in the operations of providing data to SIGECweb.[8]

The main objectives envisaged by the project were completed at the end of 2023 and involved:

- the creation of a digital database in open format, which has been aligned with the national cataloguing standards of the ICCD of the MiC (http://www.iccd.beniculturali.it/it/standard-catalografici; https://github.com/ICCd-MiBACT/Standard-catalografici; Mancinelli 2018, 279–302) and therefore is based on consolidated, certified, and shared parameters;

- the connection of the database with the web through a front-end, which guarantees public accessibility to the collection through the potential offered by ICT and is consistent with the methodological guidelines of the National Plan for the Digitisation of Cultural Heritage (PND) of the MiC (https://digitallibrary.cultura.gov.it/il-piano/),[9] as the data produced are interoperable and shareable according to the Linked Open Data paradigm (https://www.w3.org/DesignIssues/LinkedData; Birozzi et al. 2020, 1127-1345; Veninata 2020, 45-58);

- the release of the database on the web (https://nummidigitali.it/), which is configured as a container in which the needs of scientific research and the management needs of the museum, satisfied in the back-end, meet with the opportunities for disseminating and sharing data, thanks to the front-end tool, which guarantees the user interoperability within the IT system, the search and use of information, and the activation of communication processes interactive through high resolution images and 3D renderings equipped with points of interest with references to hypertexts and/or multimedia.

During 2024, however, the database will be implemented, favouring the entry of data from coins, which lack a systematic collection and often scientific updates.

### 1.1. The digital database

The digital database tool was modelled on the structure and descriptive ontology of the Scheda NU, a specialist data sheet for numismatic heritage and a cataloguing tool released by the ICCD in 2004 (Arslan et al. 2004), which still maintains the original configuration, as only the visibility on the web was updated (version 3.00: http://www.iccd.beniculturali.it/it/ricercanormative/18/nu-beni-numismatici-3_00). The layout consists of 22 paragraphs and over 250 fields, organised hierarchically into structured fields, subfields and simple fields, which require specific vocabularies and formalised languages that have become an integral part of the data sheet. However, the adaptation of the ICCD standards to the project of the Salinas Museum database immediately highlighted the need to make changes to the data sheet, since the database required a flexible

mismatic Society (http://nomisma.org/nuds). I would like to thank, for the precious collaboration, Maria Letizia Mancinelli, Rachele Aras and Fabrizio Magnani of the ICCD-MiC.

[6] https://www.ipcf.cnr.it/it/ipcf-messina/

[7] https://www.unipa.it/dipartimenti/stebicef

[8] I would like to express my gratitude for the precious collaboration to Rosina Celeste Ponterio (researcher) and to Dario Giuffrida (junior Researcher) of the IPCF-CNR of Messina; to Maria Luisa Saladino (Associate Professor of Physical Chemistry) and to Francesco Armetta (Researcher of Physical Chemistry) of the STEBICEF Department of the University of Palermo; to Laura Cappugi, director of the CRICD.

[9] The National Plan for the Digitisation of Cultural Heritage (PND), drawn up by the Central Institute for the Digitisation of Cultural Heritage - Digital Library of the Ministry of Culture, constitutes a reference document in the five-year period from 2022–2026 to start the process of digital transformation of places of culture of the Italian state and improve the valorisation of cultural heritage. For the guidelines for digitisation processes, see https://docs.italia.it/italia/icdp/icdp-pnd-digitalizzazione-docs/it/v1.0-giugno-2022/index.html; for the guidelines for the drafting of the Data Management Plan by the Central Institute for the Digitisation of Cultural Heritage - Digital Library, see https://docs.italia.it/italia/icdp/icdp-pnd-dmp-docs/it/v1.0-giugno-2022/index.html.

cataloguing base that is easy to use and is suited to the study needs and open on the web.

To this end, we resorted to the flexibility of the *Scheda NU,* whose absolute, contextual, or alternative obligations are actually limited to some fields (Mancinelli 2017, 7–8). A reasoned study was therefore carried out to prepare the changes, oriented on the one hand towards the simplification and elimination of non-mandatory and non-essential paragraphs and fields for the analysis of the monetary document, and on the other, towards the implementation, with the inclusion of fields that are essential for the study of ancient coins, but not included in the layout.

The operation presupposed interaction with ICCD technicians, so that the necessary adaptations respected the compilation rules and did not compromise the possibility of contributing the data to the national operational sharing platform SIGECweb.

At the end of this operational phase, all the proposed customisations were validated by the ICCD and the layout of the final product — which for convenience we usually call Scheda NU+ — was published, so that it was available to the entire scientific community, since it is a more complete cataloguing tool, but, at the same time, more streamlined and flexible than the original model (Sole 2022, 541–545).

The IT transposition of the Scheda NU+ was therefore incorporated into the back-end of the database, which obviously respects the hierarchical structure and cataloguing standards, as illustrated, but is also accompanied by specific tools to facilitate and speed up compilation.

The structure of the database, however, was designed to be modifiable in the future, both in view of any interventions related to the research's progress, and in order to keep the database aligned with the processes of IT evolution.

It is made up of 18 paragraphs in total and, by clicking on each one, the system refers to the descending fields — always ordered hierarchically — of which the fillable ones (145 in total) can be filled using suggestions or using the drop-down menus, which offer choice options based on the vocabularies of the Scheda NU or the possibility of inserting other memorised words, thus simplifying the work of the compiler, guided in the selection and interpretation of the labels (**Fig. 1**).

**Fig. 1.** The IT transposition of the Scheda NU+ with 18 paragraphs, suggestions, and drop-down menus, which offer choice options.

Among the paragraphs subject to the most significant structural scientific interventions, there are those relating to the context of discovery of the coin, which in the 2004 Scheda NU were represented by a small number of fields or not always associated with explicit labels for the compiler.

The "LA" paragraph, for example, includes data on the "Other administrative geographical locations" ("*Altre localizzazione geografico amministrative*") of the coin, the "historical" locations that preceded the current place of conservation.The subordinate "TLC" field "Location type" ("*Tipo di localizzazione*"), designed to ensure immediate perception of the general data on the context to which the coin belongs, was therefore equipped with explicit captions that facilitate its compilation. It therefore appears clear that, in the case of a coin found in the context of archaeological investigations, the field must be filled with the entry "place of discovery" ("*luogo di reperimento*"), while, in the case of an exemplar belonging to a collection, the item "place of origin" ("*luogo di provenienza*") must be selected.The topographic specifications are entrusted to the subsequent structured fields "PRV" and "PRC". The "PRV" field "Administrative geographic location" (*"Localizzazione geografico amministrativa"*) provides information about the geographical location of the finds on the ground, with the possibility of incorporating links containing georeferencing references, while the "PRC" field "Specific location" (*"Collocazione specifica"*) adapts to exemplars coming from collections and allows to specify, for example, the name and location of the previous collection. In particular, the "PRCM" "Collection name" (*"Denominazione raccolta"*) field contains a complete vocabulary with all the names of the numismatic collections documented at Salinas to facilitate their insertion (**Fig. 2**).

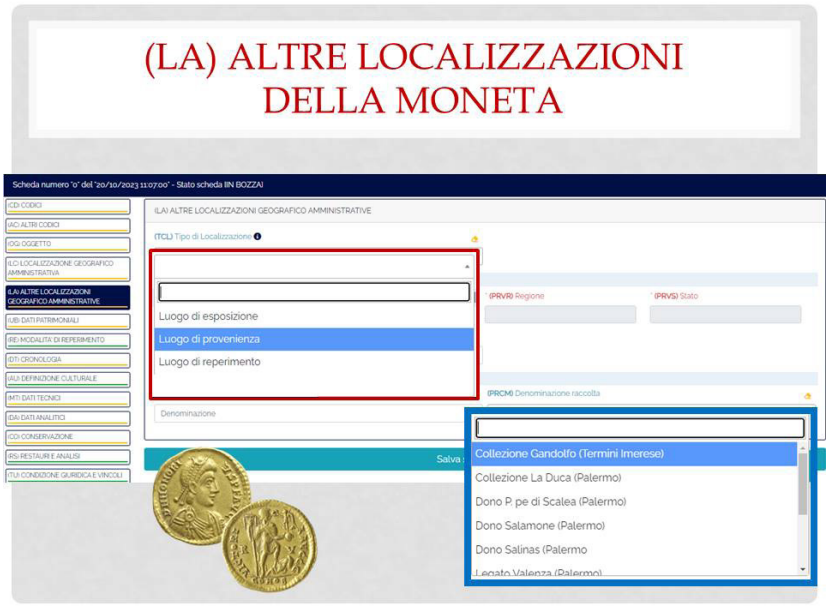



**Fig. 2.** The "LA" paragraph with data on the "Other administrative geographical locations" ("Altre localizzazione geografico amministrative"), mainly the "historical" locations that preceded the current place of conservation.

The most precise information on the archaeological context of discovery of the coins, however, is contained in the paragraph "RE" "Finding methods" ("*Modalità di reperimento*"), in which numerous customizations have been introduced, functional to offering an information framework that is as complete as possible. To this end, new fields have been introduced, each identified by a URI composed of the acronym of the reference structured field, the acronym NU and a progressive Arabic number (**Fig. 3**).

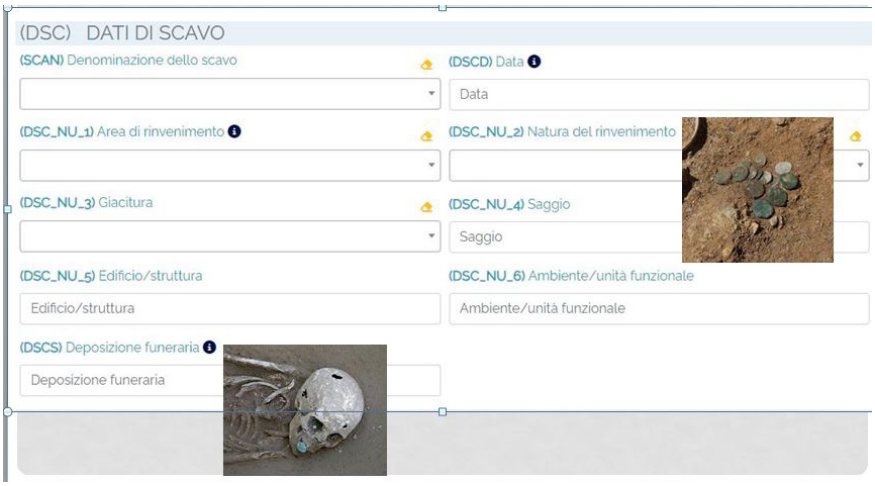



**Fig. 3.** The Scheda NU + with the customisations: the structured field "Excavation data" ("Dati di scavo").

In particular, the three structured fields, already present in the Scheda NU, have been maintained, namely "Surveys" ("*Ricognizioni*") ("RGC"), "Excavation data" ("*Dati di scavo*") ("DSC") and "Other investigations" ("*Altre indagini*") ("AIN"), to be filled in, alternatively, depending on the method of discovery of the coin, but new fields have been added, descending from "RGC" and "DSC", to qualify the "Area of discovery" ("*Area di rinvenimento*") of the coin and the "Nature of discovery" ("*Natura di rinvenimento*"), and referable only to "DSC", to indicate the type of "Laying" ("*Giacitura*"), the "Essay" ("*Saggio*"), the "Building/Structure" ("*Edificio/Struttura*"), the "Environment/Functional Unit" ("*Ambiente/Unità funzionale*") and the "Funeral Deposition" ("*Deposizione funeraria*") in which the coin is been found. In particular, the label "Funeral Deposition" ("*Deposizione funeraria*") has replaced the original "Tomb Number" ("*Numero Tomba*") label of the Scheda NU sheet, already associated with the "DSCS" code, because it is more suitable for including all the variables of funerary contexts, in which a coin can be documented.

A specific structured field was created for the "Stratigraphic Unit" ("*Unità stratigrafica*"), because the subfield of the same name in the Scheda NU appeared insufficient to contain all the stratigraphic information of a contextual numismatic study (**Fig. 4**). The structured field, on the other hand, involves linking with a series of subfields that allow more precise information to be entered: for example, the characterisation of the US of coin discovery flows into the "Definition" ("*Definizione*") field, the list of contextual materials in the field "Contextual elements" ("*Elementi contestuali*"), and the reference to those dating in the "Diagnostic findings" ("*Reperti diagnostici*") field, while the indications on the chronology deriving from the context in the "Dating" ("*Datazione*") field.

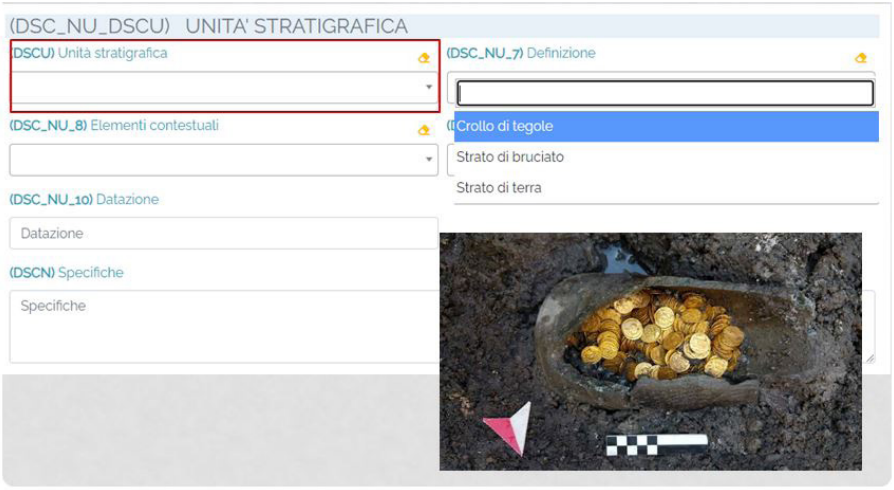



**Fig. 4.** The Scheda NU + with the customisations: the structured field "Stratigraphic Unit" ("Unità stratigrafica").

Similar implementations were reserved for the ancient manufacturing technique, adding within the paragraph "DA" "Analytical data" ("*Dati analitici*"), two structured fields dedicated to overstriking ("Undertype" = "*Sottotipo*") and testing ("Test" = "*Saggio*"), not covered in the body of the original Scheda NU.

Finally, taking advantage of the suggestions provided by the ICCD Transversal Regulation 4.00 of 2017 (Mancinelli 2017), some labels were changed, such as those relating to the structured field "AUT" "Author" ("*Autore*") (of the dies), within the paragraph "AU" "Cultural definition" ("*Definizione culturale*"), to adapt them to the specialised vocabulary in current use.

The customisations therefore allow the Scheda NU + to adapt to the potential of the numismatic heritage of the Salinas Museum, which preserves coins originally part of eighteenth- and nineteenth-century historical collections and coins from archaeological excavations conducted in central-western Sicily from around 1827 until the 1990s, and of which it is possible to reconstruct the archaeological context of discovery with the help of the documents present in the historical archive of the museum.

The adoption of cataloguing rules shared at a national level also guarantees the inclusion of the NUMMI DIGITALI datasets in SIGECweb (General Catalog Information System), a national operational platform developed and managed by the ICCD for the use and sharing of cultural heritage datasets of public property (Birozzi et al. 2020 and http://www.iccd.beniculturali.it/it/sigec-web) (**Fig. 5**).

**Fig. 5.** The inclusion of the Nummi Digitali datasets in SIGECweb (General Catalog Information System), national operational platform developed and managed by the ICCD-MiC.

Furthermore, the additional fields, unique to the Scheda NU+, are released in open format, according to the Linked Open Data (LOD) paradigm. Specific ontologies were created for these fields through the collaboration between the ICCD and the Institute of Sciences and Technologies of Cognition (ISTC) of the CNR. In fact, from the cooperation between the two institutes, the ArCo-Architecture of Knowledge project was born, which is a network of ontologies for the "transposition of the cataloguing-descriptive experience of the ICCD into the new paradigms of the semantic web" (Mancinelli, Veninata 2019, 130–134; Mancinelli, Veninata 2022, 479).

Since the NUMMI DIGITALI datasets are transferred to the SICECweb platform, they will be part of interconnected systems that enhance scientific research and institutional collaboration, adhering to the FAIR data principle: Findable, Accessible, Interoperable and Reusable (Wilkinson et al. 2016). Furthermore, SIGECweb, as a ministerial platform, is free from obsolescence and ensures the correct and protected circulation of information.

### 1.2. The web front-end

Another strong point of the project is the correspondence between the database and the front-end connected to the web (https://nummidigitali.it/), whose interface has been structured to be user-friendly (**Fig. 6**).

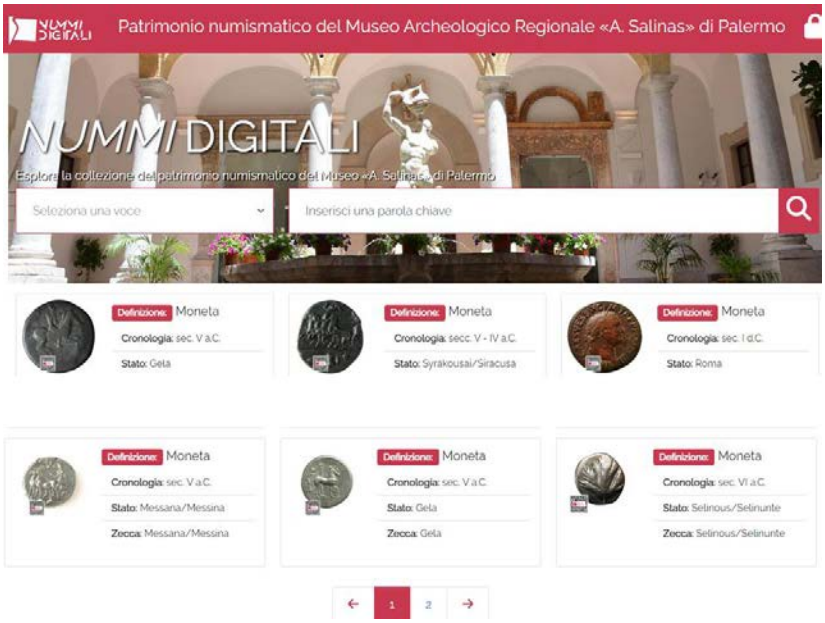



**Fig. 6.** Nummi Digitali database: the front-end on the web (https://nummidigitali.it/).

In the front-end, the user has the ability to view the Scheda NU+ in a short format, following a reasoned selection of the fields to be displayed and a varied display of some labels, which originally appeared poorly suited to understanding by the user. This choice is motivated by the desire to increase the attractiveness of the collections, reserving it for a wide audience and not exclusively for professionals, and to contribute to the maximum dissemination and accessibility of the data, according to the principles of "Public Archaeology" (Volpe 2020).

The front-end tool also offers the possibility to carry out searches by selecting an item and entering a keyword, and it gives those interested the opportunity to request from the museum the complete version of the data sheets and the related images of the coins after completing a specific form. The requests will reach the Museum Authority in the back-end, where there is a specifically dedicated space where it will be possible to check the list of requests and where the history of processed queries will remain in memory.

Particular attention was paid to the display of the images associated with the coin data sheet, always at high resolution with a large image size, in order to capture the details. Some are in 2D, while others have been rendered in 3D and in augmented form, as they are equipped with points of interest, which refer to specific hypertexts and/or multimedia to activate interactive communication processes with the user (**Fig. 7**).

**Fig. 7.** The Scheda NU + with the customisations: the structured field "Stratigraphic Unit" ("Unità stratigrafica").

In addition, the results of the investigation of the metallic composition – performed with the XRF spectroscopy – were added. This information is also contained in the points of interest of the 3D models of the coins as functional hypertexts to arouse the user's interest, while the insights from the analysis will flow into the field of the data sheet reserved for analyses.

The unconditional diffusion of images on the web is inhibited by a series of IT measures, such as the impossibility of saving, copying and pasting, showing on another page or tab, as well as by the superposition of a protection QR Code with reference to copyright notes.

The NUMMI DIGITALI project therefore allows the Salinas to be the first museum in Italy to have an accessible and interoperable digital numismatic database, adhering to institutional cataloguing standards to ensure semantic alignment with the ontology proposed by accredited institutions and significant international projects, such as Nomisma.org (http://nomisma.org)[10] of the American Numismatic Society.

In fact, the next development objectives of the portal will concern, in addition to the implementation of the platform, the enrichment of interoperability, the launch of queries, the georeferencing of data, and the semantic alignment with databases that use the Nomisma.org ontology.

[L.S.]

## 2. NUMMI DIGITALI: a usable, accessible, cooperative by default computer cataloguing web tool

NUMMI DIGITALI represents an IT tool that makes it possible for users and scholars to access cards, timely documentation, photos, and multimedia objects which form the basis for the creation of a digital twin of numismatic funds of museums and institutes relating to the world of culture.

The Web application is characterised by its high scientific value, innovative method of cataloguing, exploitation and dissemination of contents based on modern WEB interfaces, cooperation specifications, and models designed to guarantee flexible management of metadata and catalogued information referring to a specific currency, as objects and structured information that comply with SIGECweb and Semantic Web requirements, i.e. data packages that can also be exploited in the form of LODs.

The system also offers tools to respond with punctuality, reliability, and quality regarding the use of documentary sources and research.

NUMMI DIGITALI takes the form of a cloud solution for the digitisation of the cataloguing process, offering – primarily to the cataloguer – a tool for cataloguing according to ICCD regulations and the contents for compiling NU cards of a numismatic cultural object; secondly, NUMMI DIGITALI is a tool for disseminating and promoting cultural content, a prerogative of researchers and users interested in learning more.

The system is integrated with editing and multimedia content management tools and is designed for interoperability with third-party systems for the management of individual flows to and from SigecWeb, the tool at the basis of the National Catalogue of Italian Cultural Heritage.

The design and development activities are carried out thanks to the creation of a multidisciplinary working group, characterising NUMMI DIGITALI as a powerful IT tool for management, valorisation of the numismatic heritage, and the simultaneous creation of a digital archive, as well as the definition of export and supply procedures of the National Catalogue.

The platform was designed to support the processes of collection, systematisation, and archiving of numismatic cards and the simultaneous valorisation and dissemination of a vast array of textual, photographic, and multimedia information, fully qualifiable come LOD.

Characteristics and constraints underlying the design and development of the NUMMI DIGITALI Platform are as follows:

[10] For the ontology proposed by Nomisma.org (Numismatic Description Schema, NUDS), see: http://nomisma.org/nuds.

- Full compatibility with the current ICCD Cataloguing Standards and with the Knowledge Architecture and Knowledge Graph systems of the Italian cultural heritage.
- Full compliance of the front-end and back-end sections with the Design Guidelines for PA Web Services proposed by AgID (Agency for digital innovation in Italy).
- Compliance with usability and accessibility standards.
- Streamlined, step-by-step content management workflow with identification of editors, content managers, and responsible figures responsible for the publication process.
- Ownership, temporal validity, and cataloguing changes tracked using digital keys (Log).
- Full compliance with SaaS First and Mobile First logics and with the PNRR principles aimed at the digitisation of cultural heritage
- Application stack entirely open source.

### 2.1. Main features

As a SaaS Platform, NUMMI DIGITALI presents its users with some simple, intuitive features that can be used entirely from the Web. The features in question can be divided into:

- Management and administrative such as allowing profiled users:

  - Collection, census and conservation of numismatic information according to the ICCD NU Cataloguing Standard and the new NU+;

  - Search, extraction, reproduction, and sharing of numismatic cards for each individual access request of interest to scholars and actors in the world of research;

  - Supervision of contents (textual and multimedia) subject to valorisation and sharing.

- Promotional and informative materials intended for Web users and useful for:

  - dissemination of multimedia cards and cards for easy interpretation of the information relating to the individual coins forming part of the find;

  - search for specific objects and subjects using dedicated full text tools for specific fields;

  - assistance and support to allow entitled users to request access and authorisation to reproduce numismatic cards complete in their structure and accompanying images.

Particular attention should be paid to the tools and the information and dataset sharing process integrated into NUMMI DIGITALI.

The system allows the generation, export, and display via dedicated APIs of standard XML paths, characterised by a specific and typical vocabulary and ontologies of the NU form of the ICCD National Catalogue (**Fig. 8**).

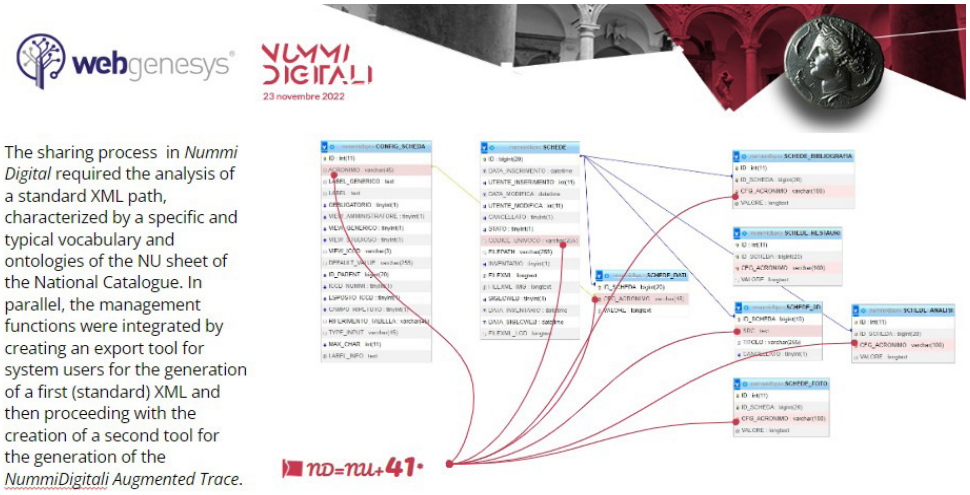



**Fig. 8.** Synoptic NU – NU+ and LOD.

For similar operations, users do not need to have any specific IT knowledge but rather use only the management functions and the (standard) XML path export tools.

At last but not least to use the service, one needs an Internet connection and the availability of a compatible browser including Edge, Firefox, or Chrome in the current major releases.

The system is deployed on a private cloud; there are no limitations or exceptions to the implementation of the system on other types of cloud, be they public, hybrid, or third communities.

The infrastructure on which the system is currently deployed is attributable to the qualified CSP ACN (Italian National Cybersecurity Agency) OVH Srl and has the following details: Dedicated Server | Type: IaaS | Card ID: IA-1331 | Category: Virtual Datacenter | Qualification Level: QC1.

The system is undergoing certification as a SaaS service on the ACN Marketplace.

[M.P.]

## 3. Digitisation and 3D modelling of numismatic finds using laser scanning combined and macrophotogrammetry

### 3.1. Introduction to 3D survey

In the framework of NUMMI DIGITALI the numismatic collection at the Salinas Archaeological Museum was digitised for the first time. The aim of digitisation activities was to preserve these artefacts and improve accessibility through 3D scanning and modelling, since many of these coins are inaccessible to the general public and are difficult for researchers to examine in detail. The high-resolution digital models allow both experts and general users to view and interact with rare coins from different eras in an immersive virtual environment.

Digitising small cultural artefacts like ancient coins poses unique challenges due to their diminutive size and intricate surface details. As summarised in a review of the literature, a key methodological difficulty is capturing the fine textures and geometries of coins in digital 3D models, as they are often less than an inch in diameter (Hess et al. 2018; Zambanini et al. 2009; MacDonald et al. 2017).

Researchers have employed a variety of approaches to address this problem. Multi-modal 2D and 3D imaging methods, coupled with analytical techniques, have been utilised to digitise coins and examine their features.

Moreover, data standardisation has been identified as crucial for advancing computational analysis of coin iconography, by enabling quantitative diachronic studies (Pavlek et al. 2022).

Interactive RTI imaging has been shown as an effective visualisation technique to capture surface details of coins and improve research and public access (Palma et al. 2014).

Several museum curators have increasingly emphasized the importance of digitising ancient coin collections to ensure the accurate recording and effective dissemination of the vast array of historical, economic, and iconographic information embedded in these artifacts.

At the intersection of archaeology, numismatics, computer science, and law enforcement, the World Wide Web has been recognised as playing a key role in coin digitisation initiatives (Jarrett et al. 2012).

A key methodological challenge faced in the project was capturing the intricate details and textures of the ancient coins in the 3D models. As the coins are quite small, often less than an inch in diameter, extremely high precision geometric data and photographic detail was required. Conventional scanning and photography approaches lacked the resolution to adequately capture the level of detail needed.

To address this challenge, IPCF-CNR developed an innovative solution combining cutting-edge laser scanning technology with specialised macro-photogrammetric imaging. This hybrid approach allowed the project to generate highly accurate sub-millimetre resolution 3D meshes representing the shape of each coin, onto which realistic photographic textures extracted from multiple macro-images could be overlaid.

Here, we report in detail the scanning technologies utilised, data processing workflows implemented, and interactive 3D model viewing platforms developed over the course of the NUMMI DIGITALI project to bring these historically significant numismatic artefacts into an accessible digital space.

### 3.2. Survey methods

The digitisation of numismatic specimens was carried out through a multimodal workflow combining structured-light 3D scanning and macro-photogrammetry, in order to obtain metrically accurate and photorealistic digital replicas.

#### 3.2.1. Laser scanning

A structured-light scanner (ATOS Q 8M, GOM-ZEISS) was employed to acquire dense geometric data. This specialised scanner is typically employed for industrial metrology applications rather than cultural heritage. It provides the sub-millimetre resolution required for capturing minute details on the coin surfaces.

The ZEISS ATOS Q 8M projects a structured pattern of blue light across the object's surface (**Fig. 9**). Sophisticated optics and sensors in the scanner head then analyse the deformations and displacements in the projected pattern as it interacts with the complex 3D geometry of the coin surface. This optical triangulation allows the precise coordinate position of each measured point to be calculated, reconstructing the coin's shape digitally point-by-point.

**Fig. 9.** Laser scanner Atos Q by GOM (Zeiss) used in combination with a tripod and the GOM ROT 350 rotation table inside the Salinas Museum.

Some key technical specifications of the ATOS Q 8M scanner are:

a) Light source: LED

b) Points per scan: 8 million

c) Measuring area: 100 x 70 mm to 500 x 370 mm

d) Point spacing: Adjustable, 0.04 – 0.15 mm

e) Working distance: 490 mm

The high density of 8 million measurement points per scan, with each point spaced apart by only 0.04 to 0.15 mm, enables extremely detailed resolution of even the smallest engravings and features on coin surfaces.

During scanning, each coin was mounted vertically on a high precision rotating platter using adhesive putty. The platter allows the coin to be smoothly rotated 360 degrees during the scan-

ning process so the scanner can capture overlapping scans of the entire circumference. The coin was then flipped over to scan the opposite side in the same manner. Combining the two sets of vertical scans produced a highly accurate overall 3D data model with precision better than 0.1 mm.

### 3.2.2. Macro-photogrammetry

While the laser scanning produced highly accurate 3D geometric data, the raw scan data lacked realistic surface colour and texture information (Morris et al. 2022). To capture the fine details and intricate patterns on the coin surfaces, macro photogrammetry techniques were utilised.

A Canon EOS 6D high resolution digital camera paired with a 60mm f/2.8 macro lens enabled extremely close-up photography of the coins with a high level of detail (**Fig. 10**). The macro lens provides a maximum reproduction ratio of 1:1, meaning the coin image projected onto the camera sensor is the same size of the actual coin. This setup allows for effective magnification of surface micro-details.

**Fig. 10.** In situ photogrammetry set-up including: Canon EOS 7D camera fixed on a tripod, macro lens (Leitz Leica, 1:2.8/60mm), automatic turntable, lightbox, printed markers.

The camera was mounted on a tripod with the coin placed horizontally on a rotating platter marked with printed control points. Control points assist in aligning and scaling the photos during post-processing. For each coin, a total of 32 images were captured with the camera rotated around a full 360 degree revolution in 22.5 degree increments.

Shooting from multiple angles all around the coin provides overlapping surface imagery that photogrammetry processing software can stitch into a seamless texture accurately mapped onto the 3D geometry. The detailed 20 megapixel images from the Canon EOS 6D provide sufficient resolution to capture intricate coin details at a sub-millimetre level while retaining accurate colour and tonality.

Combining the 3D geometry data from laser scanning with the high-resolution colour texture input from macro photogrammetry enabled building highly accurate and realistic 3D digital replicas of the museum's numismatic collection.

### 3.2.3. Data processing

The separate 3D data captured through laser scanning and photogrammetry needed to be integrated through a multi-stage processing workflow to create the final 3D coin models (Ponterio et al. 2019).

The laser scanning data was processed first using GOM Inspect Pro software. This industrial metrology software was used to align and combine the multiple vertical scans taken around each coin into a consolidated point cloud. The point cloud was then converted into a high-resolution polygon mesh representing the 3D surface geometry.

Meanwhile, the 32 macro photographs captured around each coin were processed in the Agisoft Metashape photogrammetry software. The images were aligned based on common features and the control points added during capture. A dense point cloud was generated through photogrammetric triangulation principles, which was then meshed and textured with the source photos to create a detailed colour 3D model.

The photogrammetry model provided the photographic texture, while the laser scanning model provided more accurate underlying geometry. To leverage the strengths of both, the laser scan mesh was imported into Metashape and precisely aligned to the photogrammetry model using coordinate system matching.

With the models aligned, the photographic texture from the Metashape model was then transferred and reapplied to the more accurate laser scan mesh (**Fig. 11**). This resulted in a 3D model with fine geometric details down to 0.1 mm based on the laser scan data, overlaid with a high-resolution texture map capturing patterns, colours, and imperfections derived from macro photography.

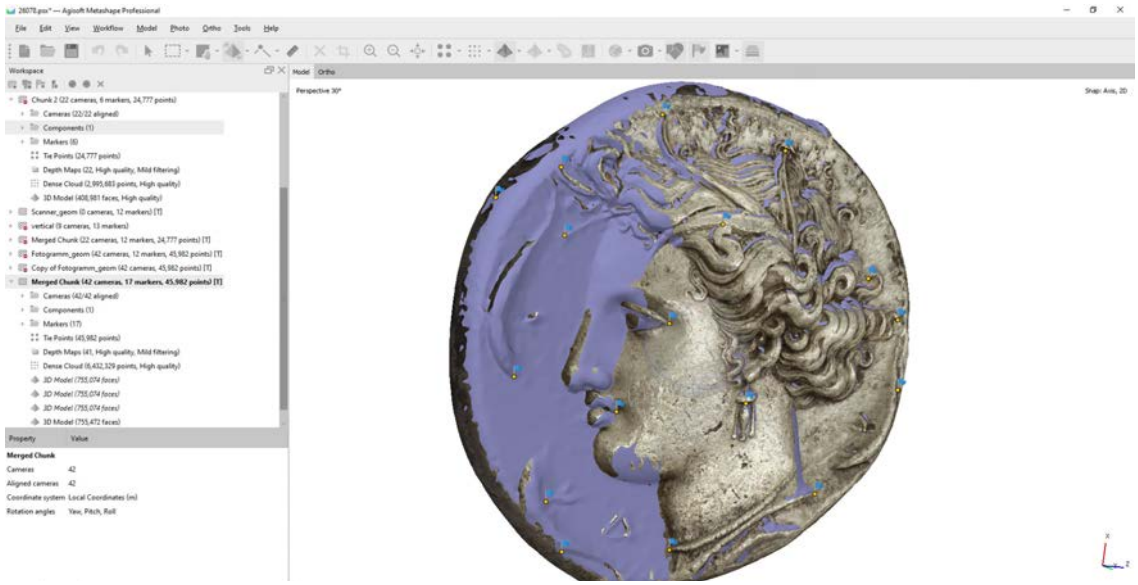


**Fig. 11.** Coin n. 26118 aligning textured photogrammetry model with laser scanning model using markers.

This optimised data processing and fusion workflow enabled creating highly detailed and photorealistic 3D digital replicas of the museum's numismatic collection for preservation, research, and public access purposes.

### 3.2.4. Sketchfab integration and online access

To facilitate interactive 3D visualisation and exploration of the digitised coins online, the completed photorealistic 3D models were exported and published on Sketchfab. Sketchfab is a widely used platform for sharing and interacting with 3D models through a WebGL-based online viewer.

A dedicated Sketchfab account was created for the NUMMI DIGITALI project (**Fig. 12**).[11] The high-resolution 3D coin models were exported from the processing software as .OBJ files and optimised for web deployment. The models were then uploaded to Sketchfab and embedded into the custom NUMMI DIGITALI viewer.

[11] https://sketchfab.com/nummidigitali

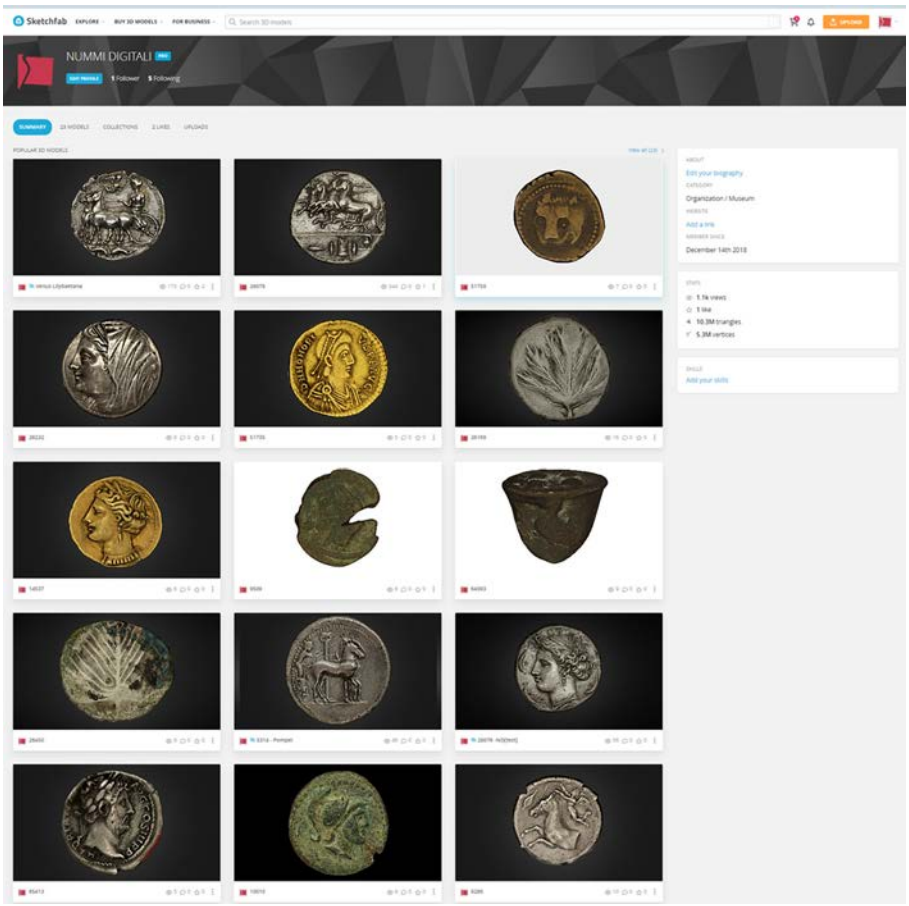
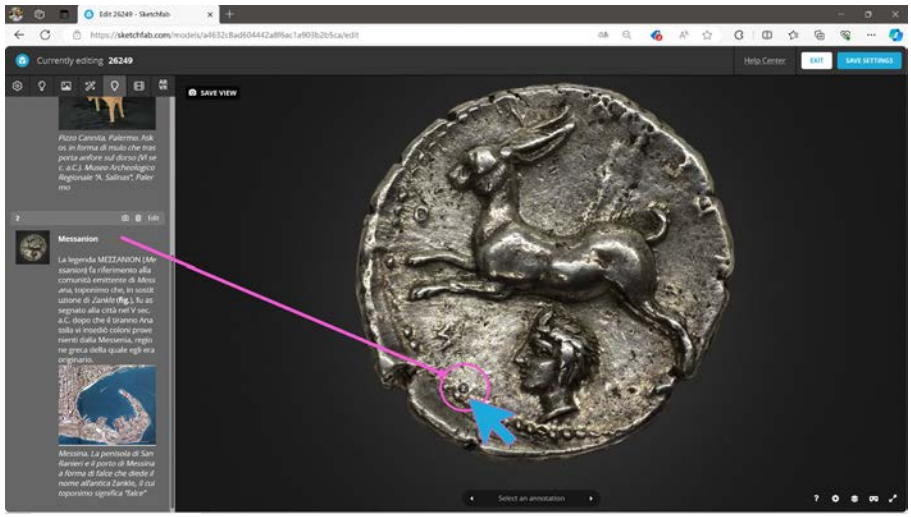



**Fig. 12.** The dedicated profile for the NUMMI DIGITALI project on Sketchfab with the uploaded 3D models.

Sketchfab provided key functionality for enhancing the online coin viewing experience. Users can interact with the 3D models at high zoom levels, enabling detailed inspection of coin surfaces. Interactive annotations provide contextual multimedia content, including high-resolution images, descriptive text, and video materials (**Fig. 13**), enhancing both specialists analysis and public engagement.

**Fig. 13.** Interactive points of interest (annotations) enriching the models: info can be accessed by clicking on numbered markers.




Additional functionality like dynamic lighting controls and texture visualisation toggles further augmented the interactive analysis capabilities. Users could adjust directional lighting to illuminate the coin surface from different angles and reveal engraved patterns.

To facilitate public access, the Sketchfab viewer code was embedded into the NUMMI DIGITALI project website developed by Webgenesys.[12] This allowed the interactive 3D coin models to be directly incorporated into the custom web application's virtual museum interface. Users can seamlessly search, browse, and study the digitised collection online, supported by an immersive, multi-media enriched 3D visualisation experience powered by the Photogrammetry-Laser Scanning digitisation approach employed.

## 4. Investigation of the metal through X-ray fluorescence spectroscopy (XRF)

In the NUMMI DIGITALI project, the investigation of the elemental composition of selected coins housed in the Salinas Museum in Palermo was performed through XRF spectroscopy. XRF spectroscopy is an effective way to carry out a quick and simple multi-elemental analysis, both qualitatively and semi-quantitatively.

The measurement is based on the principle of fluorescence. XRF is a phenomenon in which a material emits X-rays when exposed to high-energy photons, such as X-rays or gamma rays. This emission of X-rays is characteristic of the elemental composition of the material. The basic principle behind X-ray fluorescence involves the excitation of inner-shell electrons in the atoms of a sample. When the sample is bombarded with high-energy photons, some of the inner-shell electrons are ejected from their orbits. The resulting vacancies are then filled by outer-shell electrons, and as they move to lower energy states, they emit X-rays. These emitted X-rays have energies specific to the involved elements, allowing for the identification and quantification of elements in the sample. By analysing the energy and intensity of the emitted X-rays, it is possible to obtain information about the kind of elements present in the investigated area and in their amount. The possibility to use portable XRF spectroscopy made this technique very useful for the investigation of objects of interest in the field of cultural heritage, contributing to their authentication, historical understanding, and preservation. Being a non-destructive elemental analysis, its use guarantees the integrity of the precious archaeological coins, avoiding any transportation outside the museum. Concerning the investigation of coins, XRF spectroscopy is useful because coins are typically composed of various metals, and XRF can quickly determine their elemental composition. This information is crucial for identifying the metal or alloy composition and any surface treatments. This can provide insights into the coin's age, origin, and minting techniques used during a particular period and provide information about the metal sources and trade routes. This can offer insights into the historical context and connections between different civilisations. Understanding the surface characteristics can contribute to the knowledge of a coin's history and preservation. XRF can help in verifying the authenticity of coins by confirming the expected elemental composition. This is particularly important for identifying counterfeit coins that may have a different metal composition than the original ones.

In the NUMMI DIGITALI project, 32 coins in total were analysed from the STEBICEF Department of the University of Palermo. Three were made of gold, 23 of silver, and six of copper. The XRF spectra were acquired in situ by using a Tracer III SD Bruker AXS portable spectrometer. The irradiation by a rhodium target X-ray tube operating at 40 kV and 11 μA and the detection of fluorescence X-rays by a 10 $mm^2$ silicon drift X-Flash detector allows the detection of elements with atomic number $Z > 11$. A window of 3–4 mm in diameter determined the sampled area. For each measurement the acquisition time was fixed at 30 seconds in order to get a proper signal to noise ratio. A vacuum was not applied at the head of the instrument and the yellow filter, made of a thin layer of titanium and aluminum, were used to eliminate the contribution of the lightest elements. For each coin, two XRF spectra were collected in the two faces of the coins, for a total of 64 spectra.

Data was acquired with S1PXRF® software (Version 3.8.30), while the analysis of spectra was performed using ARTAX7® (Version 7.4.6.1) software in order to assign each peak and estimate the peak's area to perform a semi-quantitative comparison of the spectra. The S1PXRF® software rules the data acquisition. Argon, nickel, palladium, and rhodium signals, due to the atmo-

[12] https://nummidigitali.it

sphere and instrumental components, respectively, are also present in all spectra. The spectra can be divided into three groups as a function of the main recognised elements (**Fig. 14**).

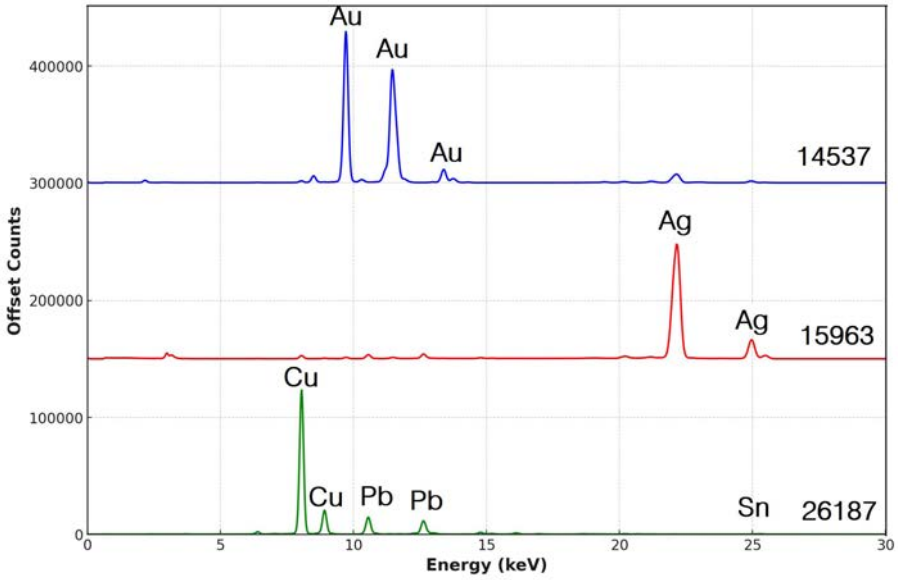



**Fig. 14.** XRF spectra acquired in the gold (coin N.I. 14537), silver (N.I. 15963) and bronze coins (N.I. 26187).

Concerning the gold coins, the presence of gold (Au) peaks was observed together with small peaks of silver (Ag) and copper (Cu). Concerning the silver coins, the presence of high silver (Ag) and copper (Cu) peaks was observed together with small peaks of gold (Au) and lead (Pb). Concerning the bronze coins, the presence of high copper (Cu) and tin (Sn) peaks was observed together with small peaks of iron (Fe), zinc (Zn), and lead (Pb). The Fe presence is due to environmental contamination and could have originated from the surroundings of the coins. The other identified elements are due to the impurity of the alloy, coming from the used raw materials. The quantitative investigation of all elements also provides information about the amount of the elements in the alloy and can be compared with the ones of similar coins.

At the moment, all the acquired information is not included in the database. XRF spectra and the elemental composition will be added as points of interest in the next step of the project.

The presence of the coin composition in the database is another novelty in this kind of database.

[D.G., M.L.S., F.A., R.C.P.]

## 5. Conclusions

NUMMI DIGITALI is a project aimed at developing numismatic research, according to the contextual approach and in synergy with the “hard” sciences.

The comparison between numismatic data and archaeological findings, in fact, represents an indispensable source of information for the chronological framing of the coin, to establish its function and its use in antiquity.

On the other hand, the interaction with the “hard” sciences broadens the knowledge relating to the intrinsic aspects of the coin from production to conservation state.

The aim of the project is therefore to improve the study of ancient coinage, through the availability of integrated scientific and interdisciplinary data, and to enhance the numismatic heritage, guaranteeing it a broad social impact, through the mediation of ICT.

The creation of a digital database, based on national cataloguing standards, has made it possible to build an architecture based on consolidated, certified and shared parameters, but at the same time subject to improvements in relation to the needs of modern numismatic research.

The database connection with the web, through a user-friendly front-end, guarantees the interoperability and shareability of research products, according to the Linked Open Data para-

digm. Furthermore, it allows public accessibility to the numismatic collection, promotes research, improves the use of information and activates interactive communication processes through high-resolution images and 3D restitutions, equipped with points of interest with hypertext and/or multimedia links.

The project also represented the opportunity for significant progress in the field of modelling and archaeometric analysis of coins.

For 3D modelling, coins represent complex artifacts because their small size and miniaturized iconography require special detection tools, so that the final product is a replica of the original, functional to research. The modelling technique therefore allowed us to develop 3D models that proved to be valuable tools for studying the types, traces of coin manufacturing and signs related to the use of money in antiquity, while preserving the artifacts through highly faithful representations. They also represent tools for attracting a wider audience, reachable on the web, consistently with the aim of ensuring a strong social impact to a science, such as numismatics, which at first glance appears, but unjustifiably, niche.

Furthermore, the analysis of the metal of the coins, through XFR spectroscopy, has allowed us to broaden and deepen our knowledge of the alloys and metals used for manufacturing, often raising questions about the sources of supply of the raw material, the manufacturing technique and the authenticity of the specimens. All inputs for other future research.

[L.S.]

**Bibliography**

Arslan, E., Bianchin Citton, E., Callegher, B., Ferrante, F., Giovetti, P., Mancinelli M. L., Stasolla, F. R., Vasco Rocca, S., 2004. Strutturazione dei dati delle schede di catalogo. Scheda NU. Beni numismatici, Roma.

Birozzi, C., Barbaro, B., Mancinelli, M. L., Negri, A., Plances, E., Veninata, C., 2020. Catalogare nel 2020. La digitalizzazione del patrimonio culturale. Aedon. Rivista di arti e diritto on line, 3 (http://www.aedon.mulino.it/archivio/2020/3/birrozzi.htm).

Hess, M., MacDonald, L.W. and Valach, J., 2018. Application of multi-modal 2D and 3D imaging and analytical techniques to document and examine coins on the example of two Roman silver denarii. Heritage Science, 6, 5. https://doi.org/10.1186/s40494-018-0169-2

Jarrett, J., Zambanini, S., Huber-Mörk, R. and Felicetti, A., 2012. Coinage, Digitization, and the World-Wide Web: Numismatics and the COINS Project. In: B. Nelson and M. Terras (eds.) Digitizing Medieval and Early Modern Material Culture, Iter, Inc., and the Arizona Center for Medieval and Renaissance Studies, 455–485. http://hdl.handle.net/20.500.12708/27745

Karami, A., Menna, F. and Remondino, F., 2022. Combining Photogrammetry and Photometric Stereo to Achieve Precise and Complete 3D Reconstruction. Sensors, 22(21), 8172. https://doi.org/10.3390/s22218172

MacDonald, L., Moitinho de Almeida, V. and Hess, M., 2017. Three-dimensional reconstruction of Roman coins from photometric image sets. Journal of Electronic Imaging, 26 (1, Special Section on Image Processing for Cultural Heritage (24)), 011017-1–20.

Mancinelli M. L. 2017, Normativa trasversale. Versione 4.00. Strutturazione dei dati e norme di compilazione, Roma.

Mancinelli L., 2018, Gli standard catalografici dell'Istituto Centrale per il Catalogo e la Documentazione. In: R. Tucci (ed.), Le voci, le opere e le cose. La catalogazione dei beni culturali demoetnoantropologici, Roma, 279–302.

Mancinelli, M. L., Veninata, C., 2019, Architettura della conoscenza: il Sistema ICCD come modello per la descrizione dei beni culturali. In: M. Mieli, C. Volpe (eds.), Conferenza GARR 2018 Selected papers, Atti della Conferenza GARR 2018 "Data Revolution" (Università di Cagliari, ottobre 2018), Roma, 130–134;

Mancinelli, Veninata 2022, Patrimonio numismatico e catalogo generale dei beni culturali: progetti in corso per l'integrazione e la valorizzazione delle conoscenze. In: S. Pennestrì (ed.), Verso il futuro, Esperienze, progetti e casi di studio tra tutela, fruizione e comunicazione del patrimonio numismatico pubblico, Acts of the "IV Incontro di studio on Medaglieri italiani, Roma, 7–8 giugno 2022, Notiziario del Portale Numismatico dello Stato, 17, 475–480.

Morris, G., Emmitt, J. and Armstrong, J., 2022. Depth and Dimension: Exploring the Problems and Potential of Photogrammetric Models for Ancient Coins. Journal of Computer Applications in Archaeology, 5(1), 112–122. https://doi.org/10.5334/jcaa.99

Palma, G., Siotto, E., Proesmans, M., Baldassari, M., Baracchini, C., Batino, S. and Scopigno, R., 2014. Telling the Story of Ancient Coins by Means of Interactive RTI Images Visualization. In: G. Earl, T. Sly, D. Wheatley, I. Romanowska, C. Papadopoulos, P. Murrieta-Flores and A. Chrysanthi (eds.) Archaeology in the Digital Era: Papers from the 40th Annual Conference of Computer Applications and Quantitative Methods in Archaeology (CAA), Southampton, 26–29 March 2012. Amsterdam University Press, 177–185. https://doi.org/10.1017/9789048519590.019

Pavlek, B., Winters, J. and Morin, O., 2022. Standards and quantification of coin iconography: possibilities and challenges. Digital Scholarship in the Humanities, 37(1), 202–217. https://doi.org/10.1093/llc/fqab030

Ponterio, R.C., Castrizio, D., Renda, V. and Giuffrida, D., 2019. Applicazioni di micro-profilometria laser e modellazione 3d per lo studio di due reperti numismatici provenienti da Reggio Calabria. In: Acts of the "8th Joint Meeting of ECFN and nomisma.org" on Coin Finds and Digital Numismatics, University of Messina, May 2–4 2019, ISSN 2723-9578 (pre-print).

Sole, L., 2022. Nummi Digitali: approcci innovativi per la conoscenza, gestione e valorizzazione del patrimonio numismatico del Museo Archeologico Regionale A. Salinas di Palermo. In: S. Pennestrì (ed.), Verso il futuro, Esperienze, progetti e casi di studio tra tutela, fruizione e comunicazione del patrimonio numismatico pubblico, Acts of the "IV Incontro di studio on Medaglieri italiani, Roma, 7-8 giugno 2022, Notiziario del Portale Numismatico dello Stato, 17, 539–547.

Veninata, C., 2020. Inside the Meanings. The Usefulness of a Register of Ontologies in the Cultural Heritage Sector. JLIS.it, 11, 2, 45–58.

Volpe, G., 2020. Archeologia pubblica. Metodi, tecniche, esperienze, Roma.

Wilkinson, M., Dumontier, M., Aalbersberg, I., 2016. The FAIR Guiding Principles for Scientific Data Management and Stewardship. Sci Data, 3, 160018.

Zambanini, S., Schlapke, M., Kampel, M. and Müller, A., 2009. Historical coins in 3D: acquisition and numismatic applications. In: Proceedings of the international symposium on virtual reality, archaeology and cultural heritage (VAST), 49–52. http://www.caa.tuwien.ac.at/cvl/wp-content/uploads/2014/12/vast09.pdf.

WEB RESOURCES

http://nomisma.org

http://www.iccd.beniculturali.it/it/ricercanormative/18/nu-beni-numismatici-3_00

http://www.iccd.beniculturali.it/it/sigec-web

http://www.iccd.beniculturali.it/it/standard-catalografici

http://nomisma.org/nuds

https://digitallibrary.cultura.gov.it/il-piano/

https://docs.italia.it/italia/icdp/icdp-pnd-digitalizzazione-docs/it/v1.0-giugno-2022/index.html

https://docs.italia.it/italia/icdp/icdp-pnd-dmp-docs/it/v1.0-giugno-2022/index.html

https://github.com/ICCd-MiBACT/Standard-catalografici

https://nummidigitali.it

https://sketchfab.com/nummidigitali

https://www.gom.com/en/products/3d-scanning/atos-q
https://www.ipcf.cnr.it/it/ipcf-messina/
https://www2.regione.sicilia.it/bbccaa/salinas/
https://www.unipa.it/dipartimenti/stebicef
https://www.w3.org/DesignIssues/LinkedData
https://www.webgenesys.it/

# A Hoard of Protomiliarenses (?) of Constantine I with Crispus and Constantine II Caesars found near the Northern Fortress Wall of Serdica

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**Abstract:** In 2019, a hoard of 92 identical coins, struck from the same pair of dies at the Sirmium's mint, was discovered during the archaeological excavations north of the Serdica's fortress wall. These coins were minted in 320, and were hidden soon after in a shallow pit next to a wooden pillar of a building within the so-called northern extension of the city – Serdica II. The ongoing political crisis in the Roman Empire at the time, particularly the conflict between Emperor Constantine I (r. 306–337) and Emperor Licinius I (r. 308–324), was the likely reason for the hoard to be deposited in the ground.

The coins belong to the CONSTANTINVS MAX AVG and CRISPVS ET CONSTANTINVS CC, SIRM type, corresponding to RIC VII, 14 (Bruun 1966, 469), and were initially classified as miliarenses (Стоянова 2020, 761). Numismatic catalogues describe them as "small medallions", despite the absence of any ceremonial imagery. The discovery of an entire series of identical specimens strongly suggests that they were part of the regular monetary system rather than ceremonial issues.

X-ray analysis reveals that the coins contain only small amounts of silver, 2–3% in the core and up to 6.4% near the surface. The total ratio of white metals (silver, tin, lead and antimony) is about 14% in the core and up to 30% near the surface, indicating that they underwent additional acid pickling to create a silver appearance. Their composition and manufacturing align more closely with folles than with miliarenses, but their weight (average 6.50 g) is double that of their contemporary folles, which had already been reduced in mass to 3.40 g by that time. Given this, we suggest that these coins represent a distinct or transitional denomination – possibly a "protomiliarenses". Based on economic analyses of the period, we estimate their value at 50 *denarii communes* each (the accounting unit standardised after Diocletian's *Edictum de Pretiis* in 301), or a total hoard value of 4,600 *denarii communes*.

**Keywords:** Protomiliarenses, Serdica's hoard, Constantine I, Monetary system, X-ray analysis.

**Historical context of the hoard from Serdica. Other hoards from the same period**

During archaeological excavations near the northern fortress wall of the ancient city of Serdica, a remarkable coin hoard was discovered, consisting of 92 identical copper-alloy coins, purposely hidden in the ground in the first half of the 4th century. Similar finds from the same period have been discovered elsewhere in southwestern Bulgaria. These hoards vary in size and are mostly consisting of folles. Some of the hoards[1] originate from graves, and should be considered as grave offerings, while others[2] can be defined as a treasure deposits in the ground. At least two of the finds, those from Karnalovo and Chukovezer, and probably the one found along the middle course of the Struma River, were likely buried as a consequence of the First Civil War between Licinius I (r. 308–324) and Constantine I (r. 306–337), after the battle of *Campus Mardiensis* (modern-day Harmanli, southern Bulgaria) in late 316–early 317 (Borislavov et al. 2019, 596, 599).

The early decades of the 4th century were a time of political crisis in the Roman Empire. Power was divided between four Augusti,[3] each of whom pursued their own policies to achieve supremacy. Initially in alliance, Constantine I and Licinius I succeeded in defeating Maxentius (r. 306–312) in 312 and Maximinus Daia (r. 305–313) in 313, effectively ending the Tetrarchy. However, they then began to dispute territories among themselves, leading to the First Civil War (316–317), which ended in victory for Constantine I. The Balkan provinces, with the exception of Thrace, were then finally annexed to his western territories. In a demonstration of his growing authority, his sons Crispus (r. 317–326) and Constantine II (r. 317–340) were proclaimed Caesars of the Western Empire, as was Licinius I's son, Licinius II (r. 317–324), who was made Caesar of the Eastern Empire (Bruun 1966, 76). However, the discord between the two emperors continued in the following years. After a series of military conflicts, known as the Second Civil War, which culminated in the Battles of Adrianople (Eastern Thrace) and Chrysopolis (northwestern Asia Minor), Constantine I ultimately emerged victorious. He became the sole ruler of the whole empire in 324 (Bruun 1966, 77).

The years of conflict in the first quarter of the 4th century, however, led to relative instability and feelings of insecurity among the population. Maintaining the army and providing for the imperial administration consumed considerable financial resources, while commodity inflation continued to rise despite the Edict of Maximum Prices (*Edictum de Pretiis Rerum Venalium*) issued by Emperor Diocletian in 301, which was engraved on the buildings around the larger markets (Cope 1977, 220). Speculation was rampant in the empire, while the supply of gold and silver needed to mint new coins declined, further devaluing the currency. As a result, the tax burden on landowners, livestock farmers, merchants, and artisans increased to the point that many started to hide their additional income, in line with the principle of "saving for a rainy day".

[1] See the coin hoards from Zabel, Tran Municipality (Владимирова-Паунова 2003, 215–225), Nedelkova Grashtitsa, Nevestino Municipality (Юрукова 1985, 61; Филипова 2020, 135–137, 244–245), Koprivlen, Hadzhidimovo Municipality (Аладжова 2002, 261–273), and from the vicinity of the necropolis near Krivonos, Breznik Municipality (Филипова 2020, 183, 241).

[2] See the coin hoards from Erul, Tran Municipality (Филов 1910, 229; Геров 1961, 329), Karnalovo, Petrich Municipality (Филипова 2010, 85–98), Chukovezer, Dragoman Municipality (Borislavov et al. 2019, 592–606), and one found in the region of the middle course of the Struma River (Филипова 2012, 33).

[3] In 308, the Tetrarchy established by Emperor Diocletian (Emperor of the East, 284–306) as a system of sharing and transferring power began to collapse as the heirs to the throne competed for greater control and influence, including by restoring the hereditary succession. At this point, the empire was ruled by four Augusti – Emperor Galerius (r. 293–311) and Emperor Maximinus Daia (r. 305–313) in the eastern provinces, and Emperor Constantine I (r. 306–337) and Emperor Licinius I (r. 308–324) in the western provinces. Following the death of Galerius in 311, power was redistributed – Licinius I secured control over the Balkans, Pannonia and Illyria, while Maximinus Daia took control over Asia and Egypt; Constantine I ruled the westernmost provinces, while Italy and Africa were occupied by Maxentius, the son of Emperor Maximian (Diocletian's Co-Emperor in 286–306), who unlawfully proclaimed himself Caesar in 306, and later Augustus (Vagi 2015, 447–451).

The preferred hiding place was often underground, where *decuriones* (regional tax collectors) would not find them. This repressive and uncertain environment of the Roman Empire likely led to a surge in coin hoarding, with numerous hoards discovered across modern-day Bulgaria, for example at Arnautito (Stara Zagora Municipality), Balchik, Bliznak (Malko Tarnovo Municipality), Gita (Chirpan Municipality), the ancient settlement of Nove (Svishtov Municipality), Razboyna (Ruen Municipality) (Филипова 2020, 235), as well as the already mentioned finds at Karnalovo (Petrich Municipality), Chukovezer (Dragoman Municipality), Erul (Tran Municipality), or the one from the middle course of the Struma River. Considering this historical context, the hoard of coins discovered immediately north of the Serdica's fortress wall fits within the same pattern of concealment and economic uncertainty.

**Archaeological context of the hoard from Serdica**

The Serdica coin hoard was discovered during rescue archaeological excavations at 35 Ekzarh Yosif Str. in Sofia (**Fig. 1**), carried out between 2017 and 2020.[4] At this site, part of Serdica's northern fortification system was uncovered, including a main fortification wall with a triangular tower and an additional outer fortification wall, known as the *proteichisma*, located approximately 20 m in front of the main wall (**Fig. 2**). This defensive system remained in use until the late 5th or early 6th century, when significant modifications were made. In addition to the construction of the *proteichisma*, the main fortification was reinforced with a second defensive belt built entirely of bricks,[5] in contrast to the original wall, which was constructed using the *opus mixtum* technique. Both walls were approximately 2 m thick, a total of about 4 m (Стоянова 2019, 283–284; Стоянова 2020, 758–759).

The first fortification of Serdica was built in the 2nd century following a devastating invasion by the Costoboci tribe, as evidenced by epigraphic inscriptions placed at the city gates (Станчева 1972, 51–54; Станчева 1975, 30–36). At 35 Ekzarh Yosif Str., south of the fortress wall, excavations have uncovered the architectural remains of a representative building with a stylobate, dating to the 2nd–3rd century (**Fig. 2**) (Стоянова 2020, 762). During the same period, the fortification wall was further reinforced by a defensive ditch located approximately 5 m in front of its outer face. However, after the mid-3rd century, the ditch was no longer in use, and the space to the north was actively occupied (Стоянова 2020, 760).

Immediately south of the *proteichisma*, at a depth corresponding to its foundation level, horizontally placed beams were discovered (mean elevation: 535.20 m[6]), which were used as foundations for buildings (**Fig. 3.1**) (Стоянова 2019, 284; Стоянова 2020, 761). Some of these beams intersect at right angles, forming rooms of various sizes and orientations aligned with the cardinal directions. In certain areas in the corners of the rooms, remnants of wooden support pillars were documented, along with a low wattle fence of beech and hazel.[7] To the west, the timber beams were positioned at a slightly higher elevation (mean elevation: 535.40 m) than those to the east (**Fig. 3.2**), indicating that they were later. These beams formed two more rectangular spaces. However, no clear boundaries for the series of rooms on either level were identified to the west or east, and to the south, only remnants of wooden pillars arranged in a row were found, likely serving a structural or load-bearing function in the buildings' architecture. Immediately adjacent to one of these pillars, on its southern side, a hoard of 92 coins was discovered within

[4] Scientific supervisor of the archaeological excavations is Polina Stoyanova, Regional History Museum of Sofia, co-author of this publication.

[5] This reconstruction is most often attributed to the building activities of Justinian I (r. 527–565), as described by Procopius of Caesarea in his treatise *"De aedificiis"*. There the author states that, along with other cities such as *Naïsopolis*, *Germaê* and *Pantalia* (Pautalia), the walls of Serdica had deteriorated *"from the passage of time"*. He further notes that Emperor Justinian I *"built them up securely and made them such that they could defy the enemy"* (Procop., Aed. 4.1.31).

[6] The measured depths are in meters according to the Baltic Height System.

[7] The identification of the wood from the wattle fence was made by Assoc. Prof. Tsvetana Popova, National Archaeological Institute and Museum of the Bulgarian Academy of Sciences, for which we thank her.

a shallow pit, 15–20 cm below the walking level (**Fig. 3.1; 3.3**), all of the same denomination, bearing the effigies of Emperor Constantine I, along with his sons Crispus and Constantine II as Caesars, minted in Sirmium.

Based on the finds uncovered in the excavations, the two wooden buildings were dated to the late 3rd or early 4th century (the earlier structure) and the first quarter of the 4th century (the later structure). Subsequently, the occupation level of the site was raised by approximately 50 cm, and the area immediately north of the fortress wall was once again designated primarily for security purposes. This is evidenced by the construction of the *proteichisma*, with only a drainage sewer dug in the space between it and the main defensive belt, featuring stone walls and a brick-paved (mean elevation: 535.10 m) (Стоянова 2020, 759) (**Fig. 2**).

In relation to the archaeological situation, it is important to note that the location and dating of the wooden buildings coincide with the territory and period of existence of the so-called Serdica II – the northern expansion of the core of ancient Serdica, whose exact purpose remains unclear. Regardless of its intended function, what stands out is the enormous size of this extension, covering approximately 550–600 dca – three times larger than the already fortified area – without parallel in any other Roman province (Динчев 2013, 259–260). The scale of the project may be explained by megalomaniacal imperial ambitions, as the rulers of this period were known for their struggles to assert power, whether shared or absolute, as well as their aspirations to create a 'New Rome' in territories they ruled. In 270, following an administrative reform, Emperor Aurelian (r. 270–275) designated Serdica as the capital of *Dacia Mediterranea*, increasing the city's political and economic significance. The northern expansion of Serdica may have begun during his reign, but it is more likely that it was initiated later, under Emperor Galerius (r. 293–311), who was born in Serdica and frequently resided there, or under Emperor Constantine I (r. 306–337), who made Serdica one of his main residences after 313. It is logical that after Constantine I chose Byzantion as his capital in 324, this construction initiative was ceased and the resources were rerouted towards the new main city.

The wooden buildings documented north of the Serdica's fortress wall are undoubtedly connected to the planned large-scale construction of the northern fortification. As a possible hypothesis, these structures may have served as temporary housing for the builders involved in the project and their families. The location is convenient, being close to both the city and the construction site. However, once the construction project was abandoned, the authority's patronage over the workers likely disappeared, leaving them and their families vulnerable. In this context, it is possible that historical events led to the destruction of the buildings, preventing the owner of the coin hoard from reclaiming the hidden treasure – suggesting that he may have perished before retrieving it.

An intriguing detail that adds to the archaeological context is the discovery of an irregular grave (elevation: 535.43 m) north of the wooden remains, on the opposite side of the *proteichisma*, belonging to a woman aged 25 to 35 years (**Fig. 4.1; 4.2**) (Стоянова 2019, 284). The numismatic material found in the surrounding layer dates entirely to the 4th century. This period is also supported by the results of radiocarbon dating of skeletal remains (**Fig. 5**), which fall within the broad chronological range from the middle of the 3rd to the middle of the 5th century.[8] With greater probability (59.1%), the date can also be placed within the narrower range from the 330s to the early 5th century, i.e., in the period after the coins from the hoard were minted.

The skeletal remains were positioned south-north (head to the south), with legs bent at the knees and randomly placed arms. Anthropological analysis[9] revealed bone abnormalities, possibly congenial (*osteogenesis imperfecta*) or acquired (rickets). However, the cause of the death of the woman was violent – she suffered an entrance wound to the right temporal bone

[8] Radiocarbon dating was performed at the SUERC Radiocarbon Laboratory, Glasgow University, Scotland. Laboratory code: SUERC-134248 (GU71614).

[9] The anthropological analysis was performed by Assist. Prof. Dr. Nadezhda Atanasova, Institute of Experimental Morphology, Pathology and Anthropology with Museum of the Bulgarian Academy of Sciences, for which we thank her.

and a blow to the right parietal bone, both of which were determined to be potentially fatal injuries. The skeleton was found directly on a layer rich in organic material (decayed wood with admixtures of sticks, straw and twigs) with relatively defined boundaries (**Fig. 4.3**). Given the wooden structures of the same period just to the south, this layer likely represents the remains of a destroyed building. Considering these findings and radiocarbon date, it is reasonable to speculate that the circumstances of the woman's death may be directly linked to the abandoned coin hoard.

**Description of the hoard**

The Serdica's hoard is remarkably uniform in both its metal composition and the face value of the coins. It consists of 92 copper alloy coins, discovered just below the walking level associated with the early 4th-century wooden building. The coins were clustered in a small hole on the south side of a wooden pillar (**Fig. 3.1; 3.3**), with some specimens even adhering to the surface of the pillar itself. Notably, no traces of textile were found on or around the coins. Due to high groundwater levels and prolonged exposure to a humid environment, the coins had undergone significant corrosion, resulting in thick deposits on both sides. After cleaning, their condition ranged from very poor to near excellent.[10] The coins were minted using classical striking technique, employing upper and lower dies. This is evidenced by characteristic cracks along the uneven edges of some specimens (e.g., see catalogue No. 1), which were likely caused by the strong impact of the striking process. These cracks are common when the coin cores are alloyed to produce higher hardness metal intended for long-term circulation.

The coins from the hoard found near the fortress wall of Serdica were minted from a billon alloy and date to the reign of Emperor Constantine I (r. 306–337), with his portrait appearing on the obverse, while his sons, Crispus[11] and Constantine II[12] are depicted as Caesars on the reverse (see the catalogue below). Notably, the head of Crispus (left) appears larger and with more mature facial features, reflecting his age of approximately 21 at the time of minting. In contrast, his half-brother Constantine II, only 8 years old, is depicted with softer and more youthful features. The mintmark *'SIRM'* beneath the Caesars' portraits indicated that the coins were struck at the Sirmium's mint, which was established in 320, closer to the border with the Eastern Empire,[13] when Constantine I began preparing for a military campaign against Licinius I. It remained in operation until 326, two years after Constantine's final victory over Licinius, at which point it was closed (Божкова 1994, 134; Bruun 1966, 462).

The depiction of Constantine I and his sons as co-rulers on coinage became possible in 317 at the earliest, following a temporary peace treaty with Licinius I, known as the Serdica's Peace, when Crispus, Constantine II, and Licinius II were elevated to the rank of Caesars by their fathers (Bruun 1966, 76). This event was commemorated at the time with the issuance of gold coins and medallions, but the first silver coinage featuring the three rulers of the Western Empire only appeared after the Sirmium's mint began operations (Ramskold, Gautier 2017, 268). Constantine I's ambitions to unite the Roman Empire under his sole rule likely led him to propagate his influence through such coin series, though issued in smaller quantities, as evidenced by the limited number of specimens found. These coins were primarily minted in silver and silver alloy – their denomination being the miliarenses. At times, they were also distributed as ceremonial gifts to the Emperor's

[10] The restoration and analysis of the condition of the coins were carried out by Emiliya Koleva, metal conservator at the Regional History Museum of Sofia, for which we thank her.
[11] Flavius Julius Crispus was the son of Emperor Constantine I from his marriage to Minervina (his first wife).
[12] Flavius Claudius Constantine II was the eldest of the three sons of Emperor Constantine I from his marriage to Flavia Maxima Fausta (his second wife), daughter of Emperor Maximian, who married her to him as a sign of allied support during the Tetrarchy.
[13] Between 320 and 324, in the period leading up to his military battles with Licinius I, Constantine I established his military headquarters in Thessalonica. However, he frequently resided in Sirmium, which served as his official capital at the time, as well as in Serdica (Божкова 1994, 134; Bruun 1966, 76–77; 462).

supporters and soldiers (Harl 1996, 161–162). However, the coins under examination in this study are not made of silver alloy. While their compositions contain some silver, the amount is too minimal to define the alloy. A detailed elemental analysis of the coins follows below, but it is worth noting that the composition of their alloy makes them a special and rare case compared to typical Roman coinage from the reign of Emperor Constantine I.

One further feature sets the coins from the Serdica's hoard apart from other specimens of the same type: a spelling error appears in the reverse legend. The name of Caesar Crispus is written as *'CRSPUS'*, with the letter *'I'* missing. Spelling mistakes like this, however, were not unusual for the period, most likely resulting from the carelessness or limited literacy of the engravers. Another possible explanation is that the coins were produced as contemporary imitations. Yet, in this specific case, their discovery – deliberately buried in the ground – and the absence of signs typical of unofficial issues (such as poor iconographic execution, illegibility, or factual inconsistencies), as demonstrated in the analysis below, make such a theory unlikely. On the contrary, there are plenty of examples of misspellings in coin legends even in official Roman mints, including the name of Crispus – for instance, in issues struck in Rome itself (**Fig. 6**).[14] Moreover, considering that the reverse type in question had only just begun to be issued, it seems improbable that imitative copies would have emerged so soon.

After the removal of surface deposits and cleaning of corroded areas, the diameter of the examined Serdica's coins ranges from approximately 19 to 23 mm, with an average weight of 5.30 g. In addition, due to corrosion processes, some coins also have minor chipping along the edges. All this suggests that their original weight was slightly higher, likely up to around 7.0 g, corresponding to the best-preserved specimen in the hoard. However, given the current metric data, it is difficult to accurately determine the exact weight variation from their original mint condition.

**Denomination of the coins from the hoard**

Initially, based on stylistic similarities of both sides of the coins with known silver-alloy specimens from the literature and digital catalogues, the Serdica's hoard was classified as being made up of miliarenses[15] (Стоянова 2020, 761). Even then, however, it was suspected that the coins contained only a minimal amount of silver. Subsequent analysis confirmed that the silver content is even lower than expected. Furthermore, the absence of other identical examples with the same stylistic characteristics led to the conclusion that these coins might represent a previously undefined[16] denomination – a "protonominal" form (transitional nominal), and in this particular case a "protomiliarenses".

Considering the historical context, it is important to note that after the abolishing of the argenteus,[17] which was minted after Diocletian's monetary reform of 294, no genuine silver coins were minted during the early reign of Constantine I (Handy 1985, 466; Bruun 1966, 4). Silver coinage reappeared after 323, with the introduction of the miliarense and siliqua[18] at the mint

[14] We are grateful to Mr. Lars Ramskold, independent researcher based in Stockholm, Sweden, for drawing our attention to these examples and kindly providing his photographs to illustrate this fascinating aspect of Roman coinage.

[15] The name miliarense literally means "part of a thousand" (from the Latin word *miliarius*, translated as thousand). The miliarenses are silver coins introduced by Emperor Constantine I, with a theoretical weight of 4.55 g, or 1/72 of a silver *libra* (the *libra* is also referred to as Roman pound and weighs about 327.45 g), equivalent to 1/1000 of a gold *libra* (Bruun 1966, 4; Филипова 2020, 18). The basis of the new coinage reform imposed in the provinces of Constantine I after 312 was the gold solidus, also weighing 4.55 g, or 1/72 of the gold *libra* (Bruun 1966, 2–3; Филипова 2020, 17).

[16] It should be noted that the actual name of most coin denominations from this period remain unknown. Researchers have assigned names based primarily on the materials used in their production and their weight in relation to each other.

[17] The name comes from Latin and means "of silver". The theoretical weight of the argenteus is 3.41 g or 1/96 of a silver *libra* (Lafaurie 1975, 78).

[18] The term originates from the Latin name of the Carob tree (*Ceratonia Siliqua*). The tree's seed had a

of Sirmium, where the Serdica's hoard was produced (Bruun 1966, 7). It has been suggested that before this time, the large bronze coins, the folles,[19] which had been reduced to 3.40 g after 312, may have been equated in value to the disappearing argenteus (of similar weight), but to maintain public confidence these coins underwent additional surface treatment to produce a silvery appearance (Bruun 1966, 11, 13). Whether the Serdica's coins were meant to mimic a theoretical silver denomination like the miliarense or held a distinct value of their own remains uncertain. They resemble pre-312 folles in size and exhibit surface enrichment with white metals (to be discussed in the next section); however, their iconographic and historiographic attributes clearly place them in a different nominal category.

The closest known coin series featuring Constantine I (bust with head right on the obverse), Crispus and Constantine II (confronted bare heads on the reverse), and with the identical legend – *CONSTANTINVS MAX AVG* and *CR[I]SPVS ET CONSTANTINVS CC, SIRM* – corresponds to *RIC VII, 14* (Bruun 1966, 469). However, the catalogue description classifies this series as a "small medallion",[20] struck from an alloy with scant traces of silver (*"very base metal"*) (Bruun 1966, 466). Despite this, it is considered a potential early attempt at a new silver coin (Bruun 1966, 4). Another example of "small medallion" of this type, but in bronze, was listed in the 1989 Numismatik Lanz auction catalogue (Münzen der Antike 1989, 69, No. 830). Its entry references P. M. Bruun's 1966 *"The Roman Imperial Coinage, 7",* and H. Cohen's 1888 *"Description historique des monnaies frappées sous l'empire romain communément appelées médailles imperials, 7"*, where the issue is described as having poor silver quality, and some of the specimens are even supposed to have been struck entirely from copper alloy (Cohen 1888, 320, No. 3), i.e., with silver content indistinguishable to the eye. To account for that, for the "small medallion" in Numismatik Lanz's 1989 *"Münzen der Antike"* is suggested the possibility of silver plating, a technique also generally observed in folles.

Medallions were commonly used as commemorative or ceremonial tokens (Sutherland 1967, 105), often minted to mark significant events in an Emperor's reign. While their designs resembled standard coinage, medallions were larger, heavier, and more detailed. Their rarity and uncertain circulation as actual money have led to ongoing debates about their function (see Dictionary of Roman Coins 1889, 548–551). The term 'small medallion' appears to have been introduced for coin-like tokens that, while smaller than traditional medallions, still met the criteria for rarity and extraordinary, and exceeded the standard coin denominations of the time. The Serdica's coins match the weight of their contemporary folles, but their mass is one and a half to two times greater (given that corrosion has likely reduced their original weight, we assume that the initial weight was closer to double). However, does this alone justify their classification as 'small medallions'?

If we return to the type of Constantine I and his sons Crispus and Constantine II as Caesars, we can draw the following conclusions. There is undoubtedly information on the coin about an

relatively consistent weight of 0.19 g (1/24 of a gold solidus), which led to the use of s*iliqua* as a unit of weight. Additionally, the name was later applied to a small silver coin introduced by Emperor Constantine I, valued based on its weight in gold. The theoretical weight of the siliqua is 3.41 g or 1/96 of a silver *libra* (Bruun 1966, 4).

[19] The follis introduced by Emperor Diocletian, initially contained about 4% silver in its alloy (Sutherland 1967, 94). Over time, its weight decreased significantly, from 8.50–11.0 g in the late 3rd century to 6.80 g (1/48 of the *libra*) after 307, and further to 3.36 g (1/96 of the *libra*) after 312–313. Its diameter also shrank from 25–27 mm to 18–19 mm (Филипова 2020, 14–15, and publications cited there), and the silver content dropped to 1–2% (Bruun 1966, 9). The Serdica's coins have a diameter of about 19–23 mm and an average weight of 5.30 g, though corrosion likely reduced their original weight from around 7.0 g (with the best-preserved coin weighing 7.08 g). Based on these metrics, they can be compared to the reduced follis of 307, a change that was implemented in the central and western mints by Emperor Constantine I, which may have been sustained for a longer period in the local areas.

[20] These are also referred to as "money medallions", and they are minted according to a fixed system that ensures they can be exchanged on the market based on their carats for an equivalent amount of regular denominations. Thus, while they are not the product of regular coinage, they can still function as the equivalent of money (Bruun 1966, 3).

important change in the government of the empire – the elevation of the two imperial successors to the rank of rulers. However, this event had already occurred in 317, and the silver issues representing it were struck in 320 at the earliest, meaning the event was no longer new enough to require a "momentous" proclamation. Immediately after the change in the coinage of Siscia, a proclamation gold medallion was issued with a denomination of a solidus and a half, where the three rulers are depicted wearing laurel wreaths (Bruun 1966, 427, No. 26). Later, in 321, when Caesars Crispus and Constantine II celebrated their *quinquennalia* (5th anniversary on the throne) (Bruun 1966, 77; Аладжова 2020, 261), a large gold medallion of the denomination of four and a half solidi (≈ 20 g) was struck for the occasion. On this medallion, the rulers are shown with their distinctive insignia: a laurel wreath, a globe, and a scepter (Bruun 1966, 470, No. 18). In contrast to the above examples, on the Serdica's specimens and their analogues known from the catalogues, Constantine I and his sons do not bear their distinctive ruler's marks, meaning their issuance was not prompted by a specific ceremonial occasion, and it is most likely to have happened in 320 (Ramskold, Gautier 2017, 268). Additionally, the characteristics of their images and the lack of more detailed symbols place them closer to the usual coinage style of the period. For this reason, and because of the other ambiguities noted, it is not surprising that discrepancies have been found in the definition of coins of this type. In digital numismatic databases, they are variously referred to as miliarenses[21] or light miliarenses[22]; medallion of uncertain value[23]; or simply silver coin of indeterminate denomination[24] (**Fig. 7**).

After the discovery of the Serdica's hoard, consisting of 92 identical specimens struck in series using the same pair of dies, the argument regarding the rarity and exceptional nature of the coin type no longer seems relevant. In fact, the presence of variation in the style of the images in other identified series of the type suggests a larger production than we might have initially imagined based on the issues published so far. The lack of elemental analysis of the alloy from which they were made prevents us from making a more accurate comparison with the Serdica's coins on this criterion as well. Judging by the images available to us, we can only assume that at least some of them were also made of an alloy with a predominant copper content (**Fig. 7**). Considering all that has been written so far, as well as the elemental composition of the coins from the collective find in front of the northern wall of Serdica, their nominal value should be determined either as unidentified or as transitionary, e.g., as that of a "protomiliarenses".

**Elemental analysis of the hoard**

Five coins from the hoard were analysed using an X-ray spectrometer[25] (**Fig. 8**). During the restoration process of the more heavily corroded coins a colour difference between the surface layer and the core of coins was observed, suggesting possible differences in the alloy composition.

[21] One specimen from the collection of the Kunsthistorisches Museum, Wien (https://www.ikmk.at/object?id=ID84480, accessed 29.12.2024); one specimen from the collection of the Portable Antiquities Scheme of the British Museum (https://finds.org.uk/database/artefacts/record/id/934107, accessed 29.12.2024); one specimen from the collection of the Museum of Fine Arts, Boston (https://collections.mfa.org/objects/523858, accessed 29.12.2024).

[22] One specimen from the collection of the Kunsthistorisches Museum, Wien (https://www.ikmk.at/object?id=ID84479, accessed 15.12.2024).

[23] One specimen from the collection of the American Numismatic Society, New York (https://numismatics.org/collection/1944.100.7964, accessed 29.12.2024).

[24] Two specimens from the collection of the British Museum, London (https://www.britishmuseum.org/collection/object/C_1844-0425-2559, accessed 15.12.2024; https://www.britishmuseum.org/collection/object/C_B-3785, accessed 29.12.2024); one specimen from the Münzkabinett der Staatlichen Museen, Berlin (https://ikmk.smb.museum/object?id=18206266, accessed 15.12.2024).

[25] The technique used for the analysis was a Schimadzu EDX-720 X-ray spectrometer. The measurements were conducted by Assist. Prof. Dr. Petya Penkova in the Laboratory for Analysis, Conservation and Restoration at the National Archaeological Institute and Museum of the Bulgarian Academy of Sciences, to whom we extend our gratitude.

This observation forced us to examine both levels of each specimen. The measurement results showed that the predominant chemical element was copper (Cu), and the additional elements were tin (Sn), lead (Pb) and silver (Ag), with minimal amounts (less than 1%) of antimony (Sb). Although the measurement of the alloy composition was taken only at one point in the area of the levels in question, it is still possible to draw a tentative conclusion regarding the percentage ratio of elements on and below the surface of the coins. As the tables in Fig. 8 show, the lead and silver content is higher in the uppermost layers compared to the lower ones. The amount of tin is within the typical range for Antiquity: less than 10% (Кулев 2012, 446), with the higher percentage again measured towards the surface, while in the core it is around 2 to 5%.[26] In total, the white metals (tin, lead, silver, and antimony) range from 10 to over 30% at the surface and about 14% in the core. This means that the colour of the alloy was close to silver-grey, especially on the outside; the coins looked as if they had been struck from silver, despite the very small amount of it – about 2–4% in the core and up to 6.4% on the surface.

The enrichment with a mixture of white metals is hardly accidental and is due to technological processes preceding the minting of the coins, i.e., those associated with the manufacture of the coin cores. We assume that one possible method was the removal of the copper oxides from the metal piece by chemical means using citrous fruit acids or vinegar, followed by polishing before the striking stage (La Niece 1993, 206). The same technological approach, the so-called pickling, was applied as early as the second half of the 3rd century, when the Roman Empire suffered from a shortage of silver ore due to continuous wars with the Germanic tribes and the Persians, which led to the temporary abandonment of the mines and the run-out of the reserves (Овчаров, Дзанев 2016, 62–63). However, a more detailed presentation of this aspect of the topic requires additional analyses and consultations with specialists. Therefore, it will not be discussed in detail here. What is important to us, in this case, is that the achievement of the silver colour of the prepared coins by enriching their surface with white metals was a consciously sought effect, closely related to the financial policy of the Roman emperors in the early 4th century. In fact, in this period, the minting of precious metals coins was followed by their rapid disappearance from the market (Аладжова 2018, 109–110), as people preferred to save them due to the uncertain times accompanied by constant wars, inflation, and increasing tax burdens. For rulers at war with each other, the maintenance of the army was a priority, but silver resources often proved insufficient to cover soldiers' stipends. It is likely that this ultimately led to the argenteus shortage crisis and the attempt by Emperor Constantine I to use the folles as a temporary alternative or to create a very low-quality new silver coin.

The whitish or silvery colour on the surface of bronze alloy coins with a low silver content but a high total white metal content does not rule out the possibility that they may have been additionally silvered,[27] at least due to the desirable appearance not always achieved by acid pickling or because of the risk of darkening soon after minting. However, no definitive evidence of silvering has been established in this case, so any assumptions about it remain speculative. For this reason, we will not delve into this aspect in detail here.

**Coin parallels**

No coins analogous to those found near the northern fortress wall of Serdica have been recorded in Bulgaria. A silver specimen from Sirmium (modern-day Sremska Mitrovica, Serbia), where the reverse type *CRISPVS ET CONSTANTINVS CC* was issued, is kept in the National Museum in Belgrade.[28] This specimen, however, was initially published as an argenteus (Античко

[26] When the tin in the bronze alloy reaches to about 5%, the melting temperature drops by about 100ºC relative to that of copper (1083ºC), and the hardness of the material increases. The addition of 3–5% lead improves the properties of the alloy in terms of its solid state processing, i.e., by forging or cutting (Кулев 2012, 448), and together with the addition of antimony significantly lower its melting temperature.
[27] For more on the types of silvering in Antiquity, see La Niece 1993.
[28] We are grateful to Mirjana Vojvoda, PhD, Numismatist, Institute of Archaeology, Belgrade (Serbia), for her assistance in locating coins of the relevant type found in the territory of Sremska Mitrovica (ancient Sirmium).

сребро 1994, 316, No. 262/1) and later as a siliqua (Васић 2008, 215, No. 207), despite its weight of 4.50 g, which places it within the theoretical weight rangees of a miliarense. While an analysis of its alloy has not been published, its weight as well as its iconographic and stylistic features distinguish it from the Serdica's coins – similar to the other examples in museum collections across Germany, Austria, Great Britain, and the USA[29] (**Fig. 7**).

One of the specimens of the *CRISPVS ET CONSTANTINVS CC* type, previously mentioned, and defined as a bronze "small medallion" with possible silver plating in the 1989 catalogue of the auction house Numismatik Lanz (Münzen der Antike 1989, 69, No. 830), very closely resembles the type and characteristics of the Serdica's coins.[30] Even with the naked eye, it is evident that not only the style of the images, but also the lettering – including the misspelling of Crispus's name – and the positioning of the letters in relation to the images are strikingly similar. The comparative examination (**Fig. 9**), which involved measuring the distances between three identified points along a line between the coin with catalogue No. 1 in the present publication and the one from *"Münzen der Antike"*, shows unequivocally that these coins belong to the same series and were struck using the same pair of dies. In other words, they share an identical "double die match" production. Unfortunately, information about the original provenance of the specimen identified as a "small medallion" is unavailable, which prevents us from conducting a more detailed interpretative analysis based on the observed similarities. It should also be noted that its weight is 5.44 g, whereas for the Serdica's find the measured weight of the better-preserved coins after restoration ranges from 5.0 to 7.0 g. Before corrosion processes began, their average weight was likely above 6.0–6.50 g. Nonetheless, the difference in weight should not be of great concern, as it is very possible that a similar deviation is present in the example from *"Münzen der Antike"*.

**The value of the hoard**

Determining the value of the coins from the Serdica's hoard is quite challenging. The primary reason for this is the lack of reliable data regarding their denomination. Referring again to P. M. Bruun, who suggests that the folles inherited from Diocletian,[31] in an already reduced variant, temporarily replaced the old silver coin, the argenteus before the introduction of the new silver coins (the miliarense and the siliqua) (Bruun 1966, 11), we must attempt to place the Serdica's coins within the context of the Diocletian's silver denomination, as minting of the Constantine I's series began only after 323. In the period after 310, when the argenteus was no longer minted, Bruun assumes that the purchasing power of the follis likely increased several times to match the value of the argenteus. However, after 312, the follis weight had been reduced to 3.36 g, and its silver content was only 1–2%.[32] Considering that the silver content of the argenteus was at least 90% (Kropff 2017, 168; Sutherland 1967, 99), it seems unlikely that the follis would have been considered equal in value, even if its surface had been enriched with white metals to resemble silver.

Despite our reservations about such a radical financial reform as equating the follis with the argenteus, we will consider the specific calculations based on this assumption. In the 1960s, specialists initially estimated that, based on the amount of silver in the alloy of the follis and the argenteus after Diocletian's reforms of 294 and 301, their value was 5 and 25 *denarii communes,*[33]

[29] See footnotes 21–24.

[30] We extend our thanks to Mr. Lars Ramskold, independent researcher, Stockholm (Sweden), for his invaluable help in identifying this parallel.

[31] Folles are also referred to as *nummi* in the literature. The term follis was likely introduced later, as during the late 3rd and 4th centuries, it was used to describe leather containers for money – sealed purses (*sacculum signatum*) – which contained a specific number of *nummi*, equivalent to 2.5 or 125 argentei, in contrast to the early 3rd century, when gold aurei or silver denarii were put inside (Handy 1985, 338–341). This system eased transactions, especially in times of frequent price increases, when a larger number of coins was needed to carry out a deal.

[32] See footnote 19.

[33] The *denarii communes* were the lowest denomination coins in Emperor Diocletian's coinage system. Made of copper alloy, their low value led to their quick disappearance from the market. However, they

respectively (Sutherland 1967, 98–99). Based on an imperial inscription discovered in 1970 at Aphrodisias (Caria, Western Asia Minor) (Erim et al. 1971, 171–177), which is believed to have laid the groundwork for the new currency revaluation, predating by about three months the Edict of Emperor Diocletian (Kropff 2017, 168), a much higher nominal value for the argenteus was established – 100 *denarii communes* (Handy 1985, 451; Cope 1977, 224), despite, according to the established maximum price for a silver *libra* of 6,000 *denarii communes* (Edict. de Pretiis, XXX.1.9, in English translation: Kropff 2016, 57–58), it should have been 62.5 *denarii communes* (1/96 of the *libra*). M. F. Handy and L. H. Cope explain this discrepancy as an overvaluation of 60% necessary to stabilise the financial system. If the actual value of a follis weighing 3.36 g after 312 was 100 *denarii communes*, then the coins from Serdica, with an average weight of 6.50 g, would be worth double – 200 *denarii communes*, with 92 coins, this would amount to 18,000 *denarii communes*. Around 320, a gold *libra* was valued at about 430,000 *denarii communes* (equivalent to 17,280 folles) (Harl 1996, 159; Handy 1985, 465), meaning the solidus was exchanged for around 6,000 *denarii communes*, and the entire Serdica's hoard would be equivalent to roughly three solidi, or nearly 14.0 g of pure gold. As we have already noted, however, it would be difficult to accept such an equivalence between coins with about 90% silver and those with only 3–4% silver, even if this were considered a deliberate political decision!

It is far more likely that the coins from Serdica are comparable to or close in value to the folles. The inscription from Aphrodisias preserves a fragment of text regarding the pricing of coins, which suggests that the follis had a denomination of 25 *denarii communes* – a re-tariffed, doubled price following the reform of 301 (Kropff 2017, 176; Handy 1985, 456–460). The double-weight coins from Serdica would then have had a single value of 50 *denarii communes*, with a total of 4,600 *denarii communes* for the 92 specimens, representing 76–77% of the gold solidus, or approximately 3.50 g of pure gold. However, at the time of minting at Sirmium or shortly thereafter, there is evidence of a reduction in the value of some of the currency, along with a resumption of the issue of genuine silver money. At this time, the price of the follis was halved, making it worth 12.5 *denarii communes*.[34] Relative to the double-weight Serdica's coins, this would suggest that they were likely worth 25 *denarii communes* each, or a total of 2,300 *denarii communes* for all 92 specimens. In terms of gold, this would be about 57% of the solidus, or 2.60 g of pure gold. In fact, in this case, we can consider the Serdica's coins as the result of a new coinage adjustment aimed at establishing a new denomination that restored their previous value after the initial value halving of the follis.

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were preserved for a long time as an accounting unit for valuing higher denominations and precious metals. The *denarii communes* were used to price goods and services in the Edict of Maximum Prices of Emperor Diocletian from 301. The mark *XXI/XX I* on the folles struck in the eastern mints is interpreted by some researchers to mean 20 sestertii (equivalent to 5 *denarii communes*) (Sutherland 1967, 98), while other suggest it represents 20 *denarii communes* (Erim et al. 1971, 176). Subsequent analysis, however, suggests it likely indicates the silver-to-copper ratio, with *XX* meaning 20 obols (equivalent to 0.57 g or 1/576 of the *libra*), and *I* representing 1 *libra* (327.45 g) (Handy 1985, 454). Converted to percentages, this ratio was approximately 3.4% silver to 96.6% copper, typical of the alloy used for the folles. Regarding the value of the follis, according to L. H. Cope, its value could not have been less than 10 *denarii communes* before the reform of 301, since the metals used in its production cost at least 8.39 *denarii communes* per coin, and likely 20 *denarii communes* after 301 (Cope 1977, 223). For a comparative table of different coin systems from the late 3rd and early 4th centuries, proposed by specialists over a 66-year period (from 1961 to 2017), along with additional information on the nominal values of coins from the time of Emperor Diocletian, see Kropff 2017, 167–187.

[34] To the east, in the lands ruled by Emperor Licinius I, 12.5 *denarii communes* billon coins were struck in 321, marked with $\frac{X}{IIS}$, which is also confirmed by papyri from the same period (Handy 1985, 463–464). This was done to compensate for their overestimation, as despite their weight reduction from the time of Emperor Constantine I, their nominal value of 25 *denarii communes* remained unchanged (Harl 1996, 163; Handy 1985, 462–463). According to K. W. Harl, 12.5 *denarii communes* coins never circulated in the western provinces (Harl 1996, 165), but such a variant, though temporary, can still be assumed to have existed until the Second Civil War in 324.

**Conclusion**

The hoard of 92 billon coins, found north of the fortification wall of Serdica, put forward not only a specific case related to the particular type of coins but also a more general academic issue concerning theoretical knowledge about coinage and economic development in the Roman Empire during the first quarter of the 4th century. The reign of Emperor Constantine I (r. 306–337) is usually associated with a period of prosperity, driven by the unification of the separate Roman territories under a single rule, as well as the romanticised image of the time when Christianity was officially recognised and found its place even within the imperial household. However, during the same period, the empire's economic development was in constant turmoil. Real financial resources were needed to maintain the army, and despite attempts to stabilise the monetary system through changes in the weight and composition of currency, as well as artificially revaluing them beyond their inherent value, commodity prices soared, and the common people grew increasingly impoverished. The fear of the population, fuelled by the ongoing wars between the co-rulers of the so-called Second Tetrarchy, is the most likely reason that coins made of precious metals, when they did reach the subjects, as well as heavier billon coins, became objects of concealment, most often buried in the ground (Божкова 1994, 128). In this uncertain situation, the hoard from Serdica was hidden. Its character, uniformity, and the fact that it is the product of the same pair of dies indicate that after the coins were issued, they were directly or indirectly (through an intermediary) acquired by their owner, who then buried them in the ground. Referring to the salary data from the Edict of Emperor Diocletian (Edict. de Pretiis, VII.1, in English translation: Kropff 2016, 17–22), we can assume that with a total value of the hoard 4,600 *denarii communes*, it would correspond to an average three-month wage for labour in construction (roughly at 50 *denarii communes* daily wage). As we already assumed, although speculatively, the archaeological context of the collective find in the northern extension of Serdica – Serdica II, at a time when it was being constructed, supports such a hypothesis.

The nominal value and actual purchasing power of the billon coins from Serdica is an extremely complex question. The alloy composition, with about 3–4% silver, is close to that of the folles, but their weight and size, as well as their origin from the imperial mint in Sirmium,[35] where mostly coins of precious metals were struck, suggest a different nominal value. This is probably the reason why individual specimens of the type *CONSTANTINVS MAX AVG*/*CRISPVS ET CONSTANTINVS CC, SIRM*, are referred to as "small medallions", also as prototype coins for the consular gold medallion minted the following year 321 (Bruun 1966, 466) or for a new silver medallion coin (Bruun 1966, 4). However, such a quantity of this type, especially in identical specimens, is found for the first time, which, according to us, categorically rejects any ceremonial character. Undoubtedly, their iconography is tied to the necessary political and imperial propaganda of the time, proclaiming to the population who the rulers of the West were, while ignoring the co-rulers of the East, but the absence of insignia in the images of Constantine I and his sons also shows a lack of solemnity: the apparent goal being to assert power over the lands they controlled. Whether they played the role of "protomiliarenses" or represented a different denomination, or whether they were an attempt to establish a coin with a value of 25 *denarii communes* at the time when Emperor Licinius I (r. 308–324) initiated the minting of half-value folles in the eastern provinces, are all questions that remain open for further analysis. The stress from the anticipated decline in the purchasing power of money is significant enough (see the papyrus letter cited in Handy 1985, 464) to suggest that larger billon coins were valuable to people, and the uncertainty of the time was a reason for their hiding. In this regard, it is also important to note that after 301, silver and gold coins played a minor role in market trade, with billon and bronze coins becoming

[35] At the same time, when the mint in Sirmium was operational, Emperor Constantine I resided for an extended period in Serdica. During this period, it was common practice for gold coins to be struck in mints located near the places where the ruler settled (Божкова 1994, 132; Bruun 1961, 23–25). There is no evidence that in 320 there was an active *officina* in Serdica, and no one has suggested that such a minting practice was used for coins struck from or appearing to be struck from silver. Therefore, we consider this hypothesis highly unlikely.

the main currency there (Kropff 2017, 177–178). This is evident from the fact that sealed purses with money (*sacculum signatum*), known as *folles*, now also contained billon and bronze coins, rather than just gold and silver, as was the case in the first half of the 3rd century (Kropff 2017, 178–179; Kenneth 1996, 166; Handy 1985, 339). Therefore, according to M. F. Handy, hoards containing larger number of coins minted by the same *officina* or through the same pair of dies, like the Serdica's hoard, are very likely to originate from a sealed and dispatched purse from the relevant mint (Handy 1985, 341–342).

As previously mentioned, it is difficult to determine the purchasing power of the coins from Serdica, but we find it most logical to estimate them at around 50 *denarii communes* each, or a total of 4,600 *denarii communes*. This is not a small sum for the time, considering that the price of 1 *kastrensis modius* (17.5 l) of wheat was 100 *denarii communes* (Edict. de Pretiis, I.1.1a, in English translation: Kropff 2016, 10). The historical and economic events of the early 4th century give us a good idea of why such a considerable sum needed to be hidden. However, it remains a mystery what exactly were the upheavals in the life of its owner that led to its burial. Whatever happened, it ultimately resulted in the discovery in present time of this hoard, which raises many questions but also significantly contributes to our knowledge of the past. And we believe that it also carries the memory of the fate of its former owner.

**Fig. 1.** Location of the site on Ekzarh Yosif Str.:
1. Serdica on the map of the Roman Empire in the 4th century (source: "The Public Schools Historical Atlas" by Charles Colbeck, 1905; https://maps.lib.utexas.edu/maps/historical/colbeck/roman_empire_4_century.jpg, accessed 15.12.2024).
2. The newly discovered section of the northern fortification system of Serdica in present-day Sofia (author: Polina Stoyanova).

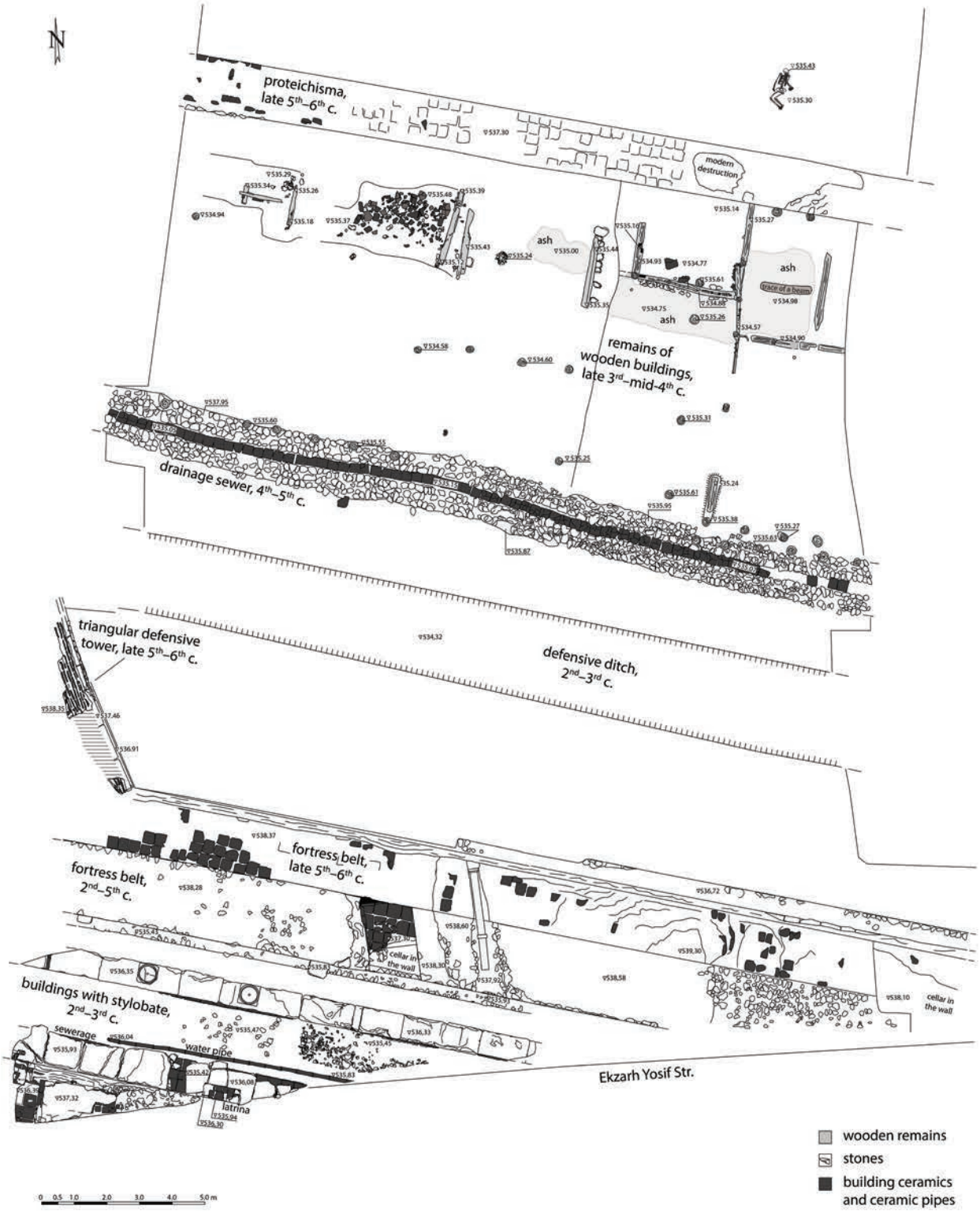



**Fig. 2.** Graphic plan of the uncovered archaeological structures from 2nd–6th centuries at 35 Ekzarh Yosif Str. (author: Polina Stoyanova).

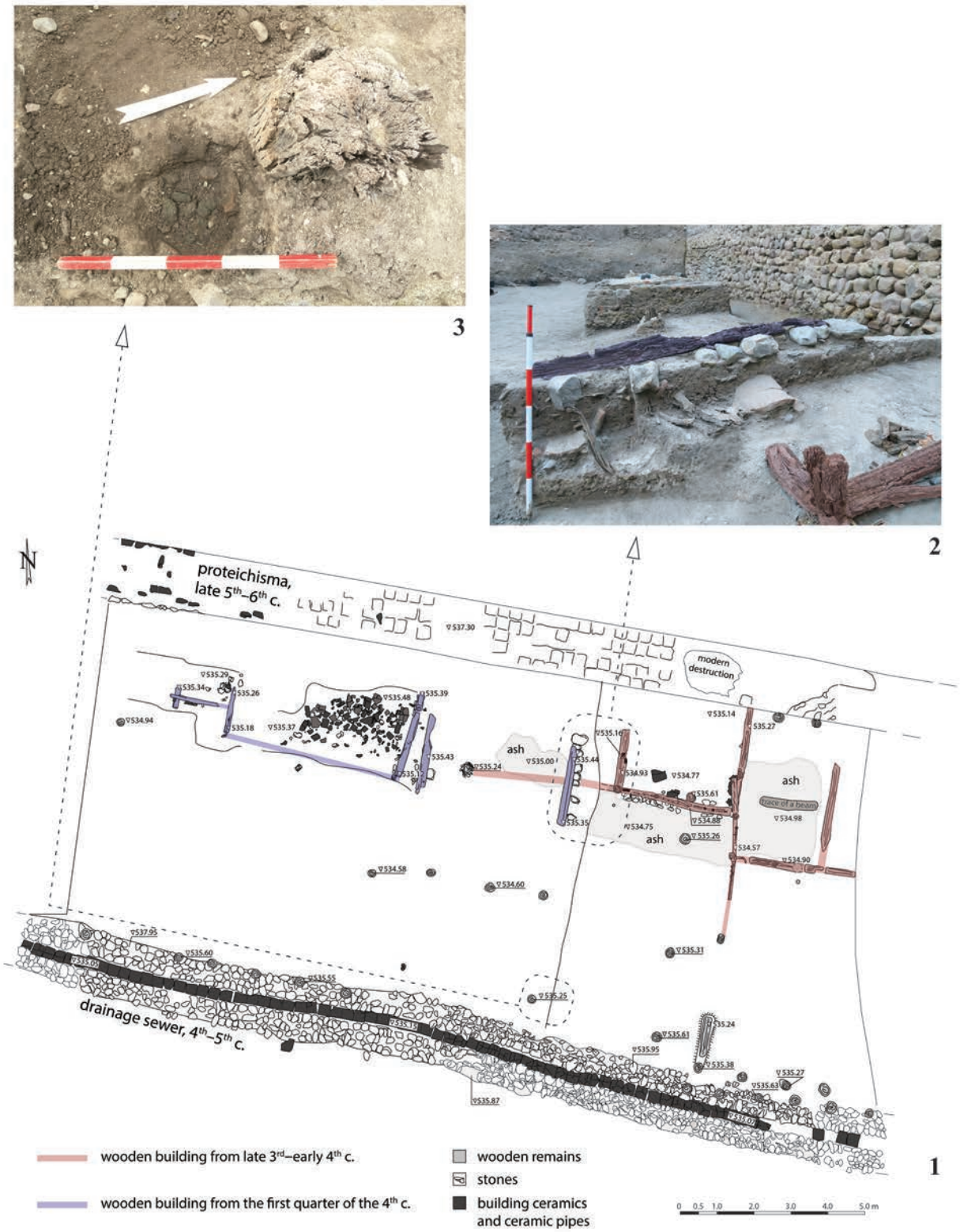
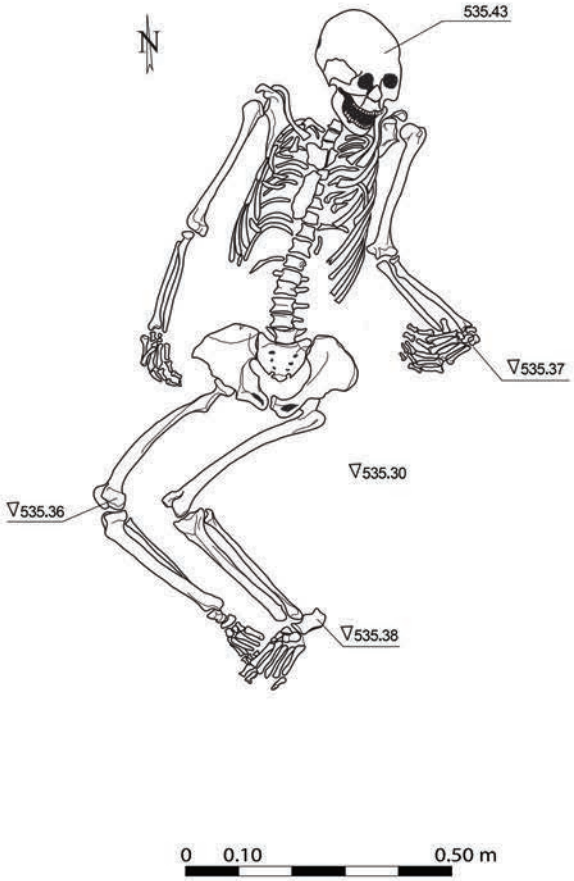



**Fig. 3.** Wooden buildings: an earlier structure from the late 3rd or early 4th century; a later structure from the first quarter of the 4th century. 1. Graphic plan (author: Polina Stoyanova). 2. Difference in the levels of the earlier and later buildings. 3. Context of the coin hoard.




3

2 1

**Fig. 4.** Irregular grave, 4th century. 1. Graphic plan (author: Polina Stoyanova). 2. Close-up photo of the skeleton. 3. The skeletal remains lying on an organic layer of a rectangular shape (probably remains of the destroyed wooden buildings).

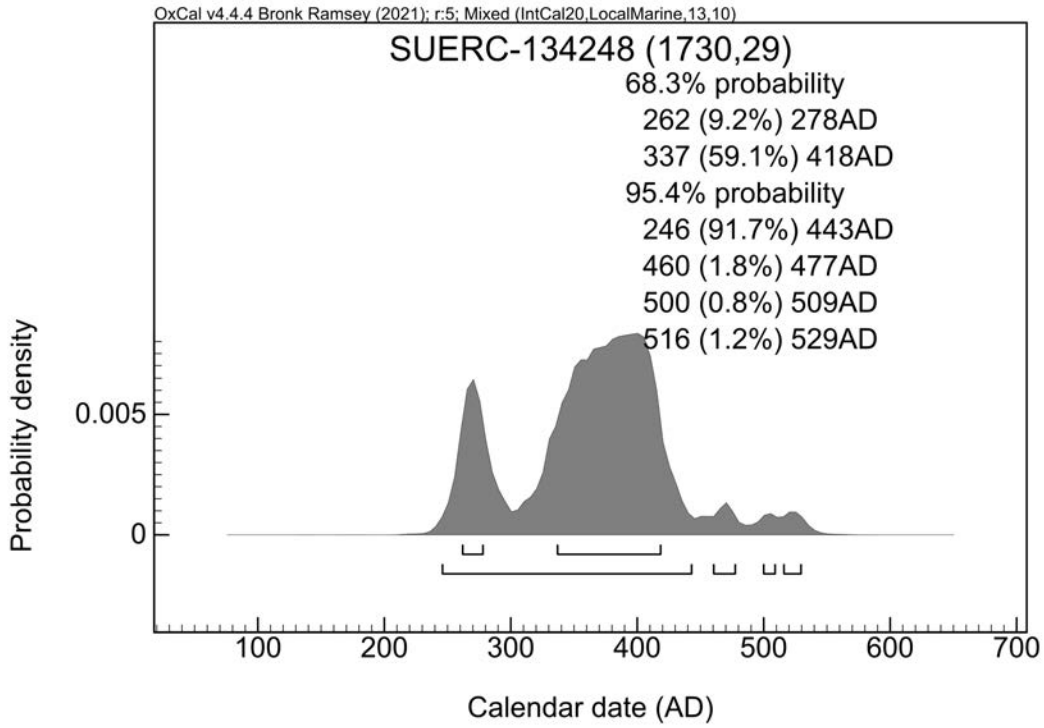



**Fig. 5.** Results of radiocarbon dating of a sample (see footnote 8) from skeletal remains from the irregular grave found immediately north of the wooden buildings and the *proteichisma*.

Obv.: **CRISP[V]S** NOB CAES,
Laureate head to right.
Rev.: CAESARVM NOSTRORVM,
around wreath containing VOT X;
RS in exergue.
RIC 240 (var.)

Obv.: FL IVL **CRIS[P]VS** NOB CAES,
Laureate, draped and cuirassed bust to left.
Rev.: PROVIDEN-TIAE CAESS,
camp gate with no doors and two turrets;
above star.
RIC 288 (var.)

**Fig. 6.** Examples of spelling mistakes in the name of Caesar Crispus, as in the case of the Serdica's hoard, on coins minted in Rome (see footnote 14).

**Fig. 7.** Coins of the CONSTANTINVS MAX AVG/CRISPVS ET CONSTANTINVS CC, SIRM type from different collections: 1. Kunsthistorisches Museum, Wien (see footnote 21); 2. Portable Antiquities Scheme of the British Museum (see footnote 21); 3. Kunsthistorisches Museum, Wien (see footnote 22); 4. American Numismatic Society, New York (see footnote 23); 5, 6. British Museum, London (see footnote 24); 7. Münzkabinett der Staatlichen Museen, Berlin (see footnote 24).

**Cat. No. 1**

| Elements | Coin surface, % | Coin core, % |
|---|---|---|
| Cu | 89.106 | 85.956 |
| Ag | 3.156 | 2.979 |
| Pb | 4.356 | 6.219 |
| Sn | 3.382 | 4.518 |
| Sb | - | 0.327 |

**Cat. No. 2**

| Elements | Coin surface, % | Coin core, % |
|---|---|---|
| Cu | 87.857 | 92.907 |
| Ag | 6.431 | 2.579 |
| Pb | 5.712 | 1.980 |
| Sn | - | 2.534 |

**Cat. No. 52**

| Elements | Coin surface, % | Coin core, % |
|---|---|---|
| Cu | 75.368 | 89.083 |
| Ag | 3.053 | 2.156 |
| Pb | 11.121 | 5.532 |
| Sn | 9.811 | 3.229 |
| Sb | 0.647 | - |

**Cat. No. 58**

| Elements | Coin surface, % | Coin core, % |
|---|---|---|
| Cu | 87.842 | 93.331 |
| Ag | 3.362 | 2.320 |
| Pb | 5.619 | 2.680 |
| Sn | 2.868 | 1.669 |
| Sb | 0.309 | - |

**Cat. No. 71**

| Elements | Coin surface, % | Coin core, % |
|---|---|---|
| Cu | 67.490 | 80.688 |
| Ag | 4.116 | 3.192 |
| Pb | 18.683 | 10.766 |
| Sn | 9.201 | 4.994 |
| Sb | 0.510 | 0.359 |

**Fig. 8.** X-ray analysis of the elemental composition of the surface and core of five specimens from the Serdica's hoard (see footnote 25).

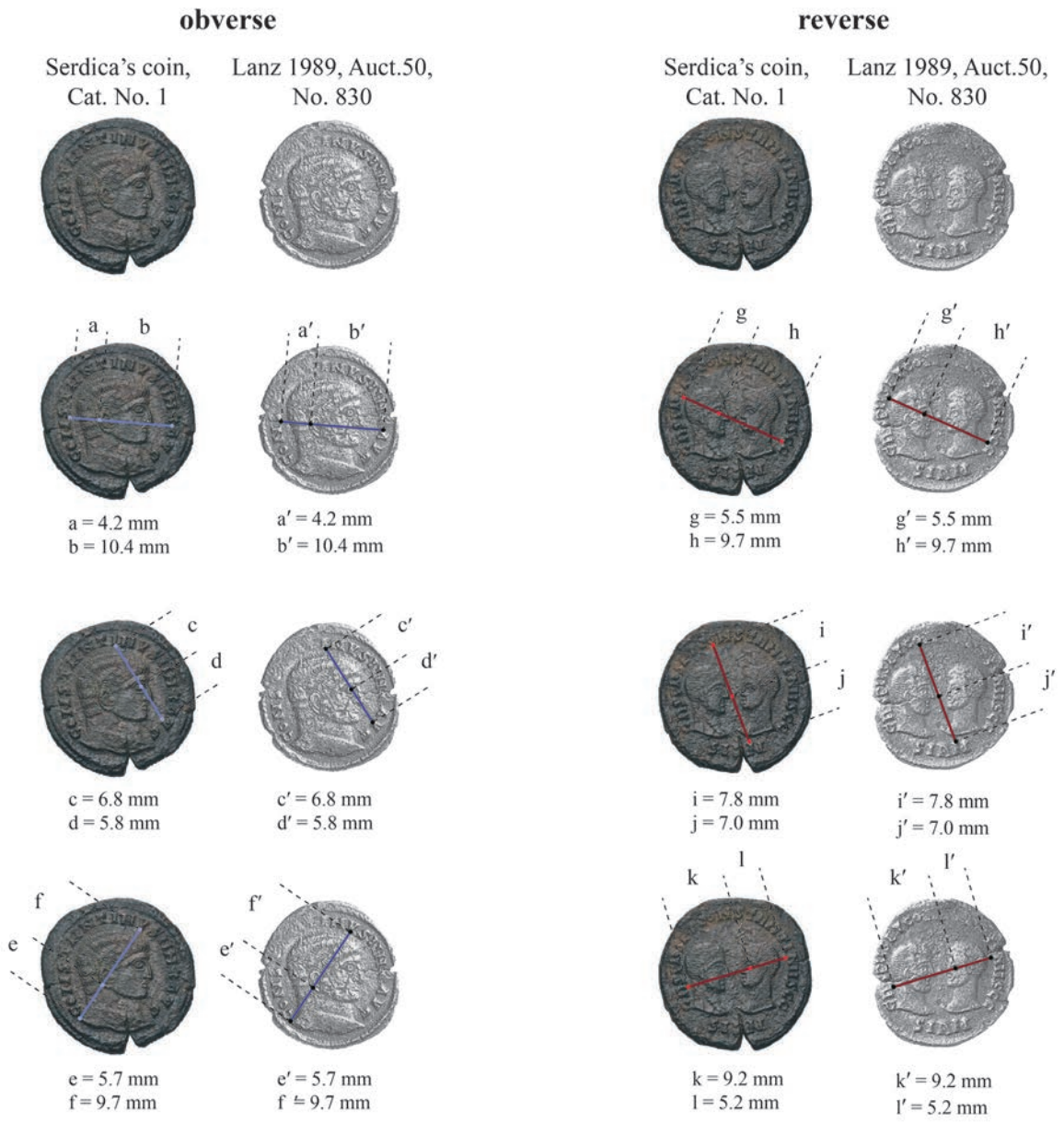



**Fig. 9.** Comparative examination between the Serdica's coin with Cat. No. 1 here and the specimen with No. 830 in Numismatik Lanz's 1989 '*Münzen der Antike*'.

## CATALOGUE

**The catalogue includes the 92 coins. All specimens are figured at natural size. The coins were photographed using the quickPX®-compact system, purchased through the project "Measuring Ancient Thrace: Re-evaluating Antiquity in Digital Age" at Sofia University "St. Kliment Ohridski", funded by the Bulgarian National Science Fund of the Ministry of Education and Science of the*

*Republic of Bulgaria under contract No. КП-06-Н50/3 from 30.11.2020.*

**Obv.**: Bare head of Constantine I right; around CONSTANTINVS MAX AVG, all within dotted border.

**Rev.**: Confronted bare heads of Crispus, left, and Constantine II, right; around CR[I]SPVS ET CONSTANTINVS CC, SIRM in exergue, all within dotted border.

*RIC VII, 14 (var.)*

**Cat. No. 1**

billon; 7.08 g; 21.9/22.0 mm; 12 h

*МИС* $M_P 1350_1$

**Cat. No. 2**

billon; 5.78 g; 21.7/21.2 mm; 12 h

*МИС* $M_P 1350_2$

**Cat. No. 3**

billon; 6.25 g; 21.5/20.9 mm; 2 h

*МИС* $M_P 1350_3$

**Cat. No. 4**

billon; 5.56 g; 20.8/21.1 mm; 12 h

*МИС* $M_P 1350_4$

**Cat. No. 5**

billon; 5.01 g; 21.5/21.3 mm; 11 h

*МИС* $M_P$ *1350*$_5$

**Cat. No. 6**

billon; 5.64 g; 21.5/21.8 mm; 11 h

*МИС* $M_P$ *1350*$_6$

**Cat. No. 7**

billon; 4.19 g; 21.4/20.2 mm; 11 h

*МИС* $M_P$ *1350*$_7$

**Cat. No. 8**

billon; 4.69 g; 20.1/21.4 mm; 12 h

*МИС* $M_P$ *1350*$_8$

**Cat. No. 9**

billon; 5.17 g; 20.9/21.1 mm; 1 h

*МИС* $M_P$ *1350*$_9$

**Cat. No. 10**

billon; 3.52 g; 22.2/21.2 mm; 11 h

*МИС* $M_P$ *1350*$_{10}$

**Cat. No. 11**

billon; 5.20 g; 20.8/20.6 mm; 11 h

*МИС* $M_P$ *1350*$_{11}$

**Cat. No. 12**

billon; 5.14 g; 21.1/20.9 mm; 1 h

*МИС* $M_P$ *1350*$_{12}$

**Cat. No. 13**

billon; 5.42 g; 20.8/21.1 mm; 12 h

*МИС* $M_P$ *1350*$_{13}$

**Cat. No. 14**

billon; 6.63 g; 21.8/21.6 mm; 11 h

*МИС* $M_P$ *1350*$_{14}$

**Cat. No. 15**

billon; 5.53 g; 20.4/20.7 mm; 1 h

*МИС* $M_P$ *1350*$_{15}$

**Cat. No. 16**

billon; 4.98 g; 20.7/21.3 mm; 1 h

*МИС* $M_P$ *1350*$_{16}$

**Cat. No. 17**

billon; 5.11 g; 22.0/21.6 mm; 11 h

*МИС* $M_P$ *1350*$_{17}$

**Cat. No. 18**

billon; 4.45 g; 21.3/22.0 mm; 11 h

*МИС* $M_P$ *1350*$_{18}$

**Cat. No. 19**

billon; 4.21 g; 20.5/19.9 mm; 1 h

*МИС* $M_P$ *1350*$_{19}$

**Cat. No. 20**

billon; 4.71 g; 20.3/20.5 mm; 5 h

*МИС* $M_P$ *1350*$_{20}$

**Cat. No. 21**

billon; 6.33 g; 21.7/20.8 mm; 12 h

*МИС* $M_P$ *1350*$_{21}$

**Cat. No. 22**

billon; 4.82 g; 20.3/19.9 mm; 2 h

*МИС* $M_P$ *1350*$_{22}$

**Cat. No. 23**

billon; 4.48 g; 20.9/21.5 mm; 1 h

*МИС* $M_P$ *1350*$_{23}$

**Cat. No. 24**

billon; 4.86 g; 20.0/20.2 mm; 1 h

*МИС* $M_P$ *1350*$_{24}$

**Cat. No. 25**

billon; 4.61 g; 21.2/21.2 mm; 11 h

*МИС* $M_P$ *1350*$_{25}$

**Cat. No. 26**

billon; 3.97 g; 20.6/20.2 mm; 12 h

*МИС* $M_P$ *1350*$_{26}$

**Cat. No. 27**

billon; 3.48 g; 21.1/21.2 mm; 11 h

*МИС* $M_P$ *1350*$_{27}$

**Cat. No. 28**

billon; 3.15 g; 21.3/21.0 mm; 11 h

*МИС* $M_P$ *1350*$_{28}$

**Cat. No. 29**

billon; 2.70 g; 20.7/21.3 mm; 12 h

*МИС* $M_P$ *1350*$_{29}$

**Cat. No. 30**

billon; 3.43 g; 21.1/21.1 mm; 12 h

*МИС* $M_P$ *1350*$_{30}$

**Cat. No. 31**

billon; 5.48 g; 21.3/20.6 mm; 12 h

*МИС* $M_P$ *1350*$_{31}$

**Cat. No. 32**

billon; 3.06 g; 21.1/22.1 mm; 12 h

*МИС* $M_P$ *1350*$_{32}$

**Cat. No. 33**

billon; 5.47 g; 20.5/20.4 mm; 12 h

*МИС* $M_P$ *1350*$_{33}$

**Cat. No. 34**

billon; 4.08 g; 22.2/21.2 mm; 1 h

*МИС* $M_P$ *1350*$_{34}$

**Cat. No. 35**

billon; 3.19 g; 22.2/21.8 mm; 12 h

*МИС* $M_P$ *1350*$_{35}$

**Cat. No. 36**

billon; 4.73 g; 21.3/20.5 mm; 11 h

*МИС* $M_P$ *1350*$_{36}$

**Cat. No. 37**

billon; 4.15 g; 20.7/20.9 mm; 2 h

*МИС* $M_P$ *1350*$_{37}$

**Cat. No. 38**

billon; 5.21 g; 21.3/21.6 mm; 1 h

*МИС* $M_P$ *1350*$_{38}$

**Cat. No. 39**

billon; 4.74 g; 21.4/20.8 mm; 2 h

*МИС* $M_P$ *1350*$_{39}$

**Cat. No. 40**

billon; 5.53 g; 21.8/21.4 mm; 12 h

*МИС* $M_P$ *1350*$_{40}$

**Cat. No. 41**

billon; 4.52 g; 20.9/21.4 mm; 11 h

*МИС* $M_P$ *1350*$_{41}$

**Cat. No. 42**

billon; 5.05 g; 20.6/20.4 mm; 12 h

*МИС* $M_P$ *1350*$_{42}$

**Cat. No. 43**

billon; 4.86 g; 20.3/20.1 mm; 11 h

*МИС* $M_P$ *1350*$_{43}$

**Cat. No. 44**

billon; 4.71 g; 22.0/21.1 mm; 1 h

*МИС* $M_P$ *1350*$_{44}$

**Cat. No. 45**

billon; 3.00 g; 20.3/21.8 mm; 11 h

*МИС* $M_P$ *1350*$_{45}$

**Cat. No. 46**

billon; 4.16 g; 19.8/20.2 mm; 11 h

*МИС* $M_P$ *1350*$_{46}$

**Cat. No. 47**

billon; 4.58 g; 21.3/21.1 mm; 12 h

*МИС* $M_P$ *1350*$_{47}$

**Cat. No. 48**

billon; 6.70 g; 21.9/21.9 mm; 11 h

*МИС* $M_P$ *1350*$_{48}$

**Cat. No. 49**

billon; 5.68 g; 23.1/21.2 mm; 12 h

*МИС* $M_P$ *1350*$_{49}$

**Cat. No. 50**

billon; 4.93 g; 21.5/21.7 mm; 5 h

*МИС* $M_P$ *1350*$_{50}$

**Cat. No. 51**

billon; 4.54 g; 21.5/19.9 mm; 1 h

*МИС* $M_P$ *1350*$_{51}$

**Cat. No. 52**

billon; 4.93 g; 22.0/21.2 mm; 10 h

*МИС* $M_P$ *1350*$_{52}$

**Cat. No. 53**

billon; 3.92 g; 19.8/19.4 mm; 11 h

*МИС* $M_P$ *1350*$_{53}$

**Cat. No. 54**

billon; 5.22 g; 20.9/22.0 mm; 12 h

*МИС* $M_P$ *1350*$_{54}$

**Cat. No. 55**

billon; 5.68 g; 21.9/21.4 mm; 1 h

*МИС* $M_P$ *1350*$_{55}$

**Cat. No. 56**

billon; 3.62 g; 21.7/19.9 mm; 10 h

*МИС* $M_P$ *1350*$_{56}$

**Cat. No. 57**

billon; 5.88 g; 21.1/21.1 mm; 12 h

*МИС* $M_P$ *1350*$_{57}$

**Cat. No. 58**

billon; 5.70 g; 22.5/22.4 mm; 1 h

*МИС* $M_P$ *1350*$_{58}$

**Cat. No. 59**

billon; 5.39 g; 21.8/20.9 mm; 1 h

*МИС* $M_P$ *1350*$_{59}$

**Cat. No. 60**

billon; 5.50 g; 21.6/21.6 mm; 11 h

*МИС* $M_P$ *1350*$_{60}$

**Cat. No. 61**

billon; 4.43 g; 22.1/21.3 mm; 11 h

*МИС* $M_P$ *1350*$_{61}$

**Cat. No. 62**

billon; 4.39 g; 21.4/21.3 mm; 1 h

*МИС* $M_P$ *1350*$_{62}$

**Cat. No. 63**

billon; 3.60 g; 20.7/20.1 mm; 11 h

*МИС* $M_P$ *1350*$_{63}$

**Cat. No. 64**

billon; 4.86 g; 21.5/20.8 mm; 1 h

*МИС* $M_P$ *1350*$_{64}$

**Cat. No. 65**

billon; 4.45 g; 21.1/21.0 mm; 11 h

*МИС* $M_P$ *1350*$_{65}$

**Cat. No. 66**

billon; 3.38 g; 20.7/21.2 mm; 12 h

*МИС* $M_P$ *1350*$_{66}$

**Cat. No. 67**

billon; 4.74 g; 20.5/20.5 mm; 11 h

*МИС* $M_P$ *1350*$_{67}$

**Cat. No. 68**

billon; 4.09 g; 20.1/20.0 mm; 12 h

*МИС* $M_P$ *1350*$_{68}$

**Cat. No. 69**

billon; 4.99 g; 22.3/21.7 mm; 5 h

*МИС* $M_P$ *1350*$_{69}$

**Cat. No. 70**

billon; 3.49 g; 21.9/21.5 mm; 12 h

*МИС* $M_P$ *1350*$_{70}$

**Cat. No. 71**

billon; 4.49 g; 21.9/22.1 mm; 12 h

*МИС* $M_P$ *1350*$_{71}$

**Cat. No. 72**

billon; 3.27 g; 20.3/20.3 mm; 11 h

*МИС* $M_P$ *1350*$_{72}$

**Cat. No. 73**

billon; 5.04 g; 21.7/21.5 mm; 12 h

*МИС* $M_P$ *1350*$_{73}$

**Cat. No. 74**

billon; 5.16 g; 22.1/21.9 mm; 10 h

*МИС* $M_P$ *1350*$_{74}$

**Cat. No. 75**

billon; 4.34 g; 19.3/19.4 mm; 11 h

*МИС* $M_P$ *1350*$_{75}$

**Cat. No. 76**

billon; 3.31 g; 18.6/18.9 mm; 11 h

*МИС* $M_P$ *1350*$_{76}$

**Cat. No. 77**

billon; 3.28 g; 20.6/19.9 mm; 12 h

*МИС* $M_P$ *1350*$_{77}$

**Cat. No. 78**

billon; 3.97 g; 22.9/21.8 mm; 4 h

*МИС* $M_P$ *1350*$_{78}$

**Cat. No. 79**

billon; 3.35 g; 22.2/21.6 mm; 12 h

*МИС* $M_P$ *1350*$_{79}$

**Cat. No. 80**

billon; 5.77 g; 22.9/23.0 mm; 5 h

*МИС* $M_P$ *1350*$_{80}$

**Cat. No. 81**

billon; 3.74 g; 21.2/20.3 mm; 1 h

*МИС* $M_P$ *1350*$_{81}$

**Cat. No. 82**

billon; 3.83 g; 20.0/19.1 mm; 4 h

*МИС* $M_P$ *1350*$_{82}$

**Cat. No. 83**

billon; 3.19 g; 20.3/19.7 mm; 12 h

*МИС* $M_P$ *1350*$_{83}$

**Cat. No. 84**

billon; 4.17 g; 20.9/21.1 mm; 11 h

*МИС* $M_P$ *1350*$_{84}$

**Cat. No. 85**

billon; 4.02 g; 20.6/21.1 mm; 1 h

*МИС* $M_P$ *1350*$_{85}$

**Cat. No. 86**

billon; 2.66 g; 22.2/21.3 mm; 12 h

*МИС* $M_P$ *1350*$_{86}$

**Cat. No. 87**

billon; 3.67 g; 21.8/20.5 mm; 1 h

*МИС* $M_P$ *1350*$_{87}$

**Cat. No. 88**

billon; 3.33 g; 22.0/21.9 mm; 1 h

*МИС* $M_P$ *1350*$_{88}$

**Cat. No. 89**

billon; 2.51 g; 21.5/20.8 mm; 1 h

*МИС* $M_P$ *1350*$_{89}$

**Cat. No. 90**

billon; 2.88 g; 19.4/19.5 mm; 12 h

*МИС* $M_P$ *1350*$_{90}$

**Cat. No. 91**

billon; 2.42 g; 18.9/17.8 mm; 12 h

*МИС* $M_P$ *1350*$_{91}$

**Cat. No. 92**

billon; 1.66 g; 18.9/16.7 mm; 12 h

*МИС* $M_P$ *1350*$_{92}$

**Bibliography**

Аладжова, Д., 2002. Римски и византийски монети, в: Божкова, А., Делев, П. (ред.), Копривлен, 1 (спасителни археологически проучвания по пътя Гоце Делчев – Драма 1998 – 1999 г.). Археологически институт с музей – БАН, София, 261–273.

Аладжова, Д., 2018. Монети и пломби от времето на тетрархията, открити в Сердика. Нумизматика, сфрагистика и епиграфика, 14, 107–114.

Аладжова, Д., 2020. Печат на Константин Велики и синове от западната крепостна порта в Сердика. Известия на Националния археологически институт, 46 (Доткова, М. (ред.), Carissimae magistrae grato animo. Сборник в памет на проф. Йорданка Юрукова), 259–264.

Античко сребро, 1994. Поповић, И. (прир.), Античко сребро у Србији. Народни музеј Београд, Београд.

Божкова, Б., 1994. Монетна политика в Тракия през IV в. Епохи, 4, 126–135.

Васић, М., 2008. Златни и сребрни новац касне антике (284–450. године): из збирке Народног музеја у Београду. Народни музеј Београд, Београд.

Владимирова-Паунова, В., 2003. Античен некропол край с. Забел, Трънско (Резултати от археологическите разкопки през 1999 – 2000 година). Известия на исторически музей – Кюстендил, 9.2, 215–225.

Геров, Б., 1961. Проучвания на западнотракийските земи през римско време, 1. Годишник на Софийския университет – Филологически факултет, 54.3, 1959/1960 (1961).

Динчев, В., 2013. Северната крепост на *Serdica* (Сердика II). История и актуално състояние на проучванията. Известия на Националния археологически институт, 41 (Динчев, В. (ред.), In Honorem Professoris Георги Кузманов), 237–279.

Кулев, И., 2012. Археометрия. Университетско издателство „Св. Климент Охридски“, София.

Овчаров, В., Дзанев, Г., 2016. Археометрично изследване на римското сребърно монетосечене по материали от български музеи. Археология, 1–2, 58–66.

Станчева, М., 1972. Надписът за изграждането на крепостта на гр. Сердика. Векове, 1, 51–54.

Станчева, М., 1975. Втори надпис за крепостната стена на Сердика. Археология, 3, 30–36.

Стоянова, П., 2019. Участък от северната крепостна стена на Сердика, в: Археологически открития и разкопки през 2018 г. Национален археологически институт с музей – БАН, София, 282–285.

Стоянова, П., 2020. Участък от северната крепостна стена на антична Сердика, в: Археологически открития и разкопки през 2019 г., 2. Национален археологически институт с музей – БАН, София, 758–762.

Филипова, С., 2010. Колективна монетна находка от село Кърналово, Петричко. Нумизматика, сфрагистика и епиграфика, 6, 85–98.

Филипова, С., 2012. Монетна циркулация по средното течение на река Струма в периода 294 – 498 г. Нумизматика, сфрагистика и епиграфика, 8, 31–50.

Филипова, С., 2020. Монети и монетна циркулация през Късната античност (294–498 г.) по горното и средното течение на река Струма. ProVias, София.

Филов, Б., 1910. Археологически паралели. Студии върху историята на античното изкуство в България. Сборник за народни умотворения, наука и книжнина, 26, 1–80.

Юрукова, И., 1985. Монетни находки открити в България през 1982 г. Археология, 2, 58–64.

Borislavov, B., Georgieva, E., Prokopov, I., Doychinova, M., 2019. Coin Hoard from the Rescue Archaeological Excavations at Site 11Б – Chukovezer Village, Dragoman Municipality. Comparative Analysis with Coin Hoards from the Region of Southwestern Bulgaria. Материалы по археологии и истории античного и средневекового Причерноморья, 11, 592–606.

Bruun, P., 1961. Studies in Constantinian Chronology. Numismatic Notes and Monographs, 146. The American Numismatic Society, New York.

Bruun, P. M., 1966. Constantine and Licinius. A.D. 313–337, in: C. H. V. Sutherland, R. A. G. Carson (Eds.), The Roman Imperial Coinage, 7. Spink and Son LTD, London.

Cohen, H., 1888. Description historique des monnaies frappées sous l'empire romain communément appelées médailles impériales, 7. Rollin & Feuardent, Paris.

Cope, L. H., 1977. Diocletian's Price Edict and Second Coinage Reform in the Light of Recent Discoveries. The Numismatic Chronical, 17, 220–226.

Dictionary of Roman Coins, 1889. George Bell and Sons, London.

Erim, K. T., Reynolds, J., Crawford, M., 1971. Diocletian's Currency Reform; A New Inscription. The Journal of Roman Studies, 61, 171–177.

Handy, M. F., 1985. Studies in the Byzantine Monetary Economy, c. 300–1450. Cambridge University Press, Cambridge.

Harl, K. W., 1996. Coinage in the Roman Economy, 300 B.C. to A.D. 700. The Johns Hopkins University Press, Baltimore.

Kropff, A., 2016. An English translation of the Edict on Maximum Prices, also known as the Price Edict of Diocletian, https://www.academia.edu/23644199, accessed 15.12.2024.

Kropff, A., 2017. Diocletian's Currency System after 1 September 301, an Inquiry into Values. Revue Belge de numismatique et de sigillographie, 163, 167–187.

Lafaurie, J., 1975. Réformes monétaires dAurélien et de Dioclétien. Revue numismatique, 17, 73–138.

La Niece, S., 1993. Silvering, in: La Niece, S., Craddock, P. (Eds.), Metal Plating and Platination: Cultural, Technical and Historical Developments. Butterworth-Heinemann, Oxford, 201–210.

Münzen der Antike, 1989. Auktion 50, 27. November 1989. Numismatik Lanz München.

Procopius. De Aedificiis.

Ramskold, L., Gautier, G., 2017. Constantine's FELICITAS ROMANORVM Donatives: Dynastic Propaganda and the First Miliarense. Jahrbuch für Numismatik und Geldgeschichte, 67, 241–298.

Sutherland, H. V., 1967. From Diocletian's Reform (A.D. 294) to the Death of Maximinus (A.D. 313), in: C. H. V. Sutherland, R. A. G. Carson (Eds.), The Roman Imperial Coinage, 6. Spink and Son LTD, London.

Vagi, D. L., 2015. Coinage and History of the Roman Empire, c. 82 B.C. – A.D. 480, 1: History. Routledge, New York.

# Der Hortfund von Marcianopolis: Interpretation und historischer Hintergrund

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**Abstract:** In 1929, the enormous coin hoard of Reka Devnia/Marcianopolis was discovered in two dolia in the centre of the ancient city. 81,096 coins were published. However, between 20,000 to 40,000 coins were lost after the discovery. Therefore, the end of the hoarding is not precisely fixed. The hoard cannot be used as evidence for the Roman-Gothic war of 250/251 or even for an assumed conquest of the city. Still today, coin hoards in the Balkans were too directly interpreted as sources for barbarian incursions, often built on circular argumentations. Therefore, a concise reconstruction of the major events between 238 and 258 must be given to provide the necessary historical background. Because of the specific structure, the hoard should be considered as an official coin depot of the financial administration of Moesia Inferior.

**Keywords:** Marcianopolis, Gordian III, Philippus I/II, Decius, Trebonianus Gallus, Aemilianus, Abritus, Kniva, Ostrogotha, coin hoard.

BulgNJ

## I. Der Hort und seine Fundumstände

Der große Silberhort von Reka Devnia/Marcianopolis wurde am 10.11.1929 bei Grabungsarbeiten, realiter zweifellos einer gezielten Schatzsuche, im Garten des Pavel Todorov im Zentrum der antiken Stadt in zwei tönernen Vorratsgefäßen, einem größeren und einem etwas kleineren, gefunden (Mouchmoff 1929; Mouchmov 1930; 1934, 1–3; Spoerri-Butcher 2019). In Anwesenheit einer zusammenströmenden Menschenmenge wurde ein Gefäß aufgebrochen. Dann wurde der Dorfbürgermeister informiert, der den Unterpräfekten aus Varna herbeiholt. Dieser ließ die vorhandenen Münzen sicherstellen und die Gefäße vollständig ausgraben. Allerdings war ein erheblicher Teil der Münzen bereits von den Dorfbewohnern abgezweigt, Mouchmov rechnet mit einem Minimum von 20.000 Stück, die dann privat verkauft wurden. Die geborgenen Münzen wogen 289 kg; sie wurden nach Varna gebracht; 286 kg erreichten die Museen in Sofia (236 kg) und Varna (50 kg). Der Vergleich der beiden Bestände zeigt, dass das Konvolut in Varna vor der Publikation teilweise geplündert wurde, so dass dort seltene und wertvolle Münzen fehlen; außerdem weist das Gewicht in Varna auf einen erheblich größeren, nicht nach Sofia verschickten Münzbestand hin (so auch Spoerri-Butcher 2019, 163, ursprünglich ca. 15.000?). Die in den Museen in Sofia (68.783; heute im Inventar 66.513) und Varna (12.261; 12.086 inventarisiert) befindlichen Münzen, insgesamt 81.044 (zu korrigieren auf 81.096), hat Nikola A. Mouchmov 1934 in einer für die Zeit beispielhaften Publikation vorgelegt, basierend auf der Cohen-Klassifizierung (Mouchmov 1934). Auf dieser Grundlage unternahm G. Depeyrot (2004; sehr problematisch zum historischen Kontext) eine RIC-Vorlage unter dem Gesichtspunkt der Analyse der Typen in den jeweiligen Prägephasen hinsichtlich der implizierten Herrscherpropaganda für den Zeitraum 64–

235 n. Chr. Teilaspekte untersuchten Hellings, Spoerri Butcher 2017; Lazarenko 2014; Szaivert 1985 (nicht weiterführend). Nach Typen geordnet bietet http://chr.ashmus.ox.ac.uk/hoard/3406 Einträge für 81.096 Münzen.

Bei den begrenzten Nachgrabungen legte Mouchmov (1934, 1–3) die Fundamentmauern eines Gebäudes frei, in dessen Keller- oder Untergeschoßraum (3,90 x 6,30 m) sich das Depot befand. Der Keller war ausgeräumt und nur mit dem Brandschutt des Gebäudes ausgefüllt. Das Gebäude hat eine zweite Bauphase im 5. Jh. In 2 m Tiefe fand sich verbranntes Holz und Verputz mit Resten einer Streifenbemalung an den Wänden, offensichtlich der Nutzungshorizont mit einem Holzboden. In 2,30 m Tiefe wurde der kompakte Untergrund erreicht, in den die Fundamentmauern ca. 0,90 m eingetieft waren. In der Südwestecke befanden sich die beiden Vorratsgefäße, unter ihnen Steine des Fundaments. Brandspuren in der Ecke und an den Fundamentsteinen deuten auf einen vorausgehenden Brand der hölzernen Auskleidung eines Schachtes für die Aufnahme entsprechender Deponierungen hin. Wann der Schacht mit den gefüllten Gefäßen ebenso wie der Zwischenboden mit Erdreich aufgefüllt und damit das Depot verborgen wurden, bleibt offen. Die Umgebung des Gebäudes ist von den repräsentativen Bauten geprägt gewesen. Das Flussufer war ursprünglich wesentlich weiter entfernt, das Gelände dicht bebaut.

Bis auf ganz wenige Stücke sind alle Münzen in sehr gutem Zustand, nach Marc Aurel oftmals nahezu stempelfrisch, was auf die vorausgehende Auflösung von Thesaurierungen hinweist. Der Münzbestand setzt, von den lange umlaufenden 29 Legionsdenaren des Antonius abgesehen, mit den Denarprägungen nach der Reform Neros 64 n. Chr. ein, wobei seltene Denare von Nero bis Vitellius ins Auge fallen (Nero 102, Galba 50, Otho 47, Vitellius 134 Denare). Spitzenwerte unter den gehorteten Prägungen sind nach Vespasian (1.899) Traian (5.228), Hadrian (6.737), Antoninus Pius (13.717), Marc Aurel/Lucius Verus (11.990) Commodus (3.743), Septimius Severus (16.465, davon 3.409 für Iulia Domna), Caracalla (2.570, davon 242 Antoniniane), Elagabal (5.952, davon 363 Antoniniane) und Severus Alexander (8.444). Maximinus ist noch mit 1.738 Stück vertreten, Gordian III. nur mehr mit 280 (davon 115 aus der 1. Emission 238, sonst nur bis 4. Emission), was im Vergleich mit anderen Horten mit Schlussmünze Gordian III. überrascht, ebenso das Fehlen der Prägungen Philippus I und II (zum Vergleich Varbanov 2021, 61, 64–67 zu Gordian III., Philippus, Decius; zur massiven Präsenz der Antoniniane Philippus I/II bis Decii in Gallien etwa Drost 2011/2012). Die jüngsten Prägungen sind 3 Antoniniane des Decius (Dacia, Genius Exercitus Illyriciani, Pannoniae RIC 12B, 17B, 21B) und einer für Herennius Caesar (RIC 143), letztere eine Prägung aus dem Frühjahr 251 mit Kombination des RS-Typ PIETAS AVGVSTORVM für Herennius Etruscus Augustus (RIC 152, dazu 151a.b) und noch dem VS-Stempel für Herennius Etruscus Nobilissimus Caesar. Mit dem Bestand vom 80.188 Denaren, nur 821 Antoninianen und 58 provinzialen Prägungen fällt der Hort bei einer Schlussmünze von 251 deutlich aus dem Rahmen. Metcalf (2002) ordnet deshalb den Hort in die Münzschätze mit Schlussmünze unter Gordian III. ein und möchte die Prägungen unter Decius als im Zuge von Grabung und Bergung hinzugekommen betrachten. Dies kann nicht überzeugen. Es handelte sich offenkundig um ein als Tresor sorgfältig angelegtes Depot in der Ecke des Kellers, getarnt unter dessen Boden, das mit dem Tresorhort im Gutshof von Neftenbach vergleichbar ist (Von Kaenel et al. 1993). Im Gegensatz zu diesem lassen sich für unseren Hort weder die Verteilung der Münzen noch anzunehmende Füllungsvorgänge rekonstruieren.[1] Auch ist die Aufteilung der Münzen auf beide Gefäße unbekannt. Es kommt hinzu, dass das ursprüngliche Gewicht des Hortes auf 440 kg geschätzt werden kann, was bedeutet, dass rund ein Drittel der Münzen nicht erfasst sind, so dass durchaus von ursprünglich 120.000 Münzen auszugehen wäre. Da eines der Tongefäße vor dem Auftreten der Behörde aufgebrochen wurde, können dabei gerade die prägefrischen Antoniniane

[1] Die Bedeutung für die Interpretation der Horte demonstrieren beispielhaft Estiot 1997 (individueller Sparhort mit phasenweisem Aufbau), oder der Massenhort von Frome, 52.503 Münzen (160 kg) in einem Dolium, Valerian bis Carausius, gefüllt in einem Zug aus vorsortierten Beuteln und Einzelmünzen (Moorehead 2019). Bei dem Doppeldeposit von Magny Cours (Schlussmünzen 303 n. Chr.) wurde ein Bestand von Nummi in das Gefäß des Depots I und in die untere Hälfte des Gefäßes Depot II eingefüllt, ohne erkennbare Sortierung (Estiot et al. 2011/2012). Depot II wurde mit Antoninianen und Aureliani Gordian III. bis 294 n. Chr. aufgefüllt.

der jüngsten Prägungen entnommen sein, also Prägungen für Gordian III., die Philippi und Decii, auch Gallus und Volusianus oder gar Samtherrschaft Valerian-Gallienus. Dabei ist gerade für die Regierungswechsel zu Decius und Gallus, ersterer im Zuge eines Bürgerkrieges, von erheblichen Geldzuflüssen respektive Donativen zu den Provinzheeren auszugehen. In Moesia Superior und Teilen der Pannonia Inferior liegt der Höhepunkt der Hortungen bei Schlussmünzen der Jahre 252–254 (Vojvoda, Redžić 2020; Borić-Brešković, Vojvoda 2021, 95). 250/251 war Moesia Superior nicht betroffen (unrichtig Boteva 2001, 38-40). Von dem ursprünglich wohl über 100.000 Münzen zählenden, von Legionsdenaren des Antonius jedenfalls bis 248/249 reichenden Hort von Vinik-Kamenica (heute Stadtrand von Niš; Bertol-Stipetić, Nađ 2016; Borić-Brešković, Vojvoda 2021, 97–98, 101; angeblich bis zu 350.000 Münzen in zwei Deponierungen), für den zuletzt ein Zusammenhang mit einer Villenanlage vermutet wird, sind nur ca. 10% erhalten und das auf vier Orte verstreut mit jeweils unterschiedlichen Schlussmünzen des Bestandes (Severus Alexander, Maximinus, Gordian III., Philippus I/3. Emission). Dieser Hort hat vergleichbare Charakteristika wie der Hort von Reka Devnia, entzieht sich aber einer abschließenden Beurteilung. Eine verborgene offizielle Kasse der Finanzverwaltung, die gezielt ältere Münzen aus den eingehenden Steuereinnahmen und damit aus dem Umlauf gezogen hat, ist durchaus naheliegend. Privatpersonen dieser Vermögenskategorie thesaurierten in wertbeständigen Goldmünzen (etwa Gilles 2013; Estiot 2009/2010) und massivem Silber, sie tätigten ihre Geschäfte in Goldwährung. Für die Verbergung ist am wahrscheinlichsten auf die Usurpationen des Pacatianus, Aemilianus oder Ingenuus bzw. den Bürgerkrieg gegen die Macriani zu verweisen.

In der althistorischen Forschung gilt der Reka Devnia-Hort als Musterbeispiel für die Verbergung angesichts der Gefahr durch die Goteninvasion 250/251. Dabei wird, wie generell, viel zu wenig auf die Frage geachtet, warum Horte nicht mehr geborgen wurden. Im Gegensatz zu den Horten aus Philippopolis mit dem jüngsten Fund aus einer Zerstörungsschicht (593 Silbermünzen bis Philippus; Varbanov 2021, 65–66) liegt für Marcianopolis weder eine Einnahme noch eine Zerstörung vor. Auch 269 misslang die Eroberung der stark befestigten Stadt (SHA Claud, 9, 3; Zos. 1, 42, 1; zur Münzprägung bis Philippus Hristova, Jekov 2015). Unser Hort wird bei Gerov (1977, 139) und Kolendo (2008) sogar zum Beleg für eine zweite Belagerung und Zerstörung von Marcianopolis 251. Da Münzhorte in der Rekonstruktion von Invasionen in die Balkanprovinzen – für die westlichen Provinzen setzt sich eine grundsätzliche Quellenkritik durch (vgl. Strobel 2021, bes. 185–192; Witschel 2020, bes. 432–434, 490–494, 506; vgl. Bland 2018) – oft unter Heranziehung älterer Literatur, fraglichen Quelleninterpretationen und wesentlichen Zirkelschlüssen eine zentrale Stellung einnehmen (etwa Dimitrov 2005; Găzdac 2012; Boteva 2001, von falschen historischen Annahmen ausgehend; gänzlich überholt Gerov 1977; vgl. Varbanov 2012 mit Darlegung der Problematik; doch bleibt auch er bei einer traditionellen Interpretation, so Varbanov 2021), ist es an dieser Stelle erforderlich, einen detaillierteren Überblick zu der Ereignisgeschichte 238–254 n. Chr. auf der Basis des heutigen Quellenstandes zu geben, wobei nicht zuletzt das ideologische Ostrogotha-Konstrukt bei Cassiodor-Iordanes deutlich wird.

## II. Die Ereignisse an der unteren Donau 238–249 als historischer Hintergrund

Die Hauptquelle für die Kriege an der unteren Donau und im Balkan- und Ägäisraum von 238 bis zum Gotensieg Aurelians 271 n. Chr. waren die Geschichtswerke des Atheners Dexippos, der bereits in seiner Chronik ausführlich auf diese Ereignisse eingegangen ist, wie seine Darlegung zu den maeotischen (H)eluroi im 12. Buch (F 18a.b ed. Martin) oder das Exzerpt zum Skythenkrieg des Decius und der Regierung des Gallus, das Georgios Synkellos (Treadgold 2013, 38–63) allerdings nicht dem Original, sondern einer Epitome entnommen haben muss (F 17 ed. Martin), zeigen.[2] Bedauerlicherweise fehlt die Beschreibung der Schlacht bei Abritus in den Exzerpten aus der Skythika wie in deren Wiener Palimpsest.

[2] Zu den Quellenfragen für das 3. Jh. insgesamt Bleckmann 1991; Brecht 1999; Bleckmann, Groß 2016; Mecella 2017. Zur Diskussion der Traditions- und Überlieferungszweige der früh- und mittelbyzantinischen Historiographie Treadgold 2007; 2013.

238/239 n. Chr. begannen die Auseinandersetzung mit den Karpen, die Dexippos zu den skythischen Völkern zählte und damit seine Darstellung der Skythenkriege begann (Petr. Patr. F 8; SHA Max. et Balb. 16,3; CIL 3, 12455; Strobel 2019a, 318–319; teilweise unrichtig Paschoud 2020, überholt Piso 2005). Die Karpen sahen sich hinsichtlich der gezahlten Subsidien gegenüber den Goten ungerecht behandelt und nutzten die römische Schwächung durch den Bürgerkrieg 238 zu einem Einfall nach Untermoesien ins Umland von Histria; sie wurden von dem neuen Statthalter Tullius Menophilus (PIR² T 387), der sich bei der Verteidigung Aquileias gegen Maximinus hervorgetan hatte, zurückgeschlagen, wofür Gordian III. seine 2. imperatorische Akklamation annahm (CIL 6, 1091). Die Münzprägung von Marcianopolis feiert den Sieg ausgiebig unter Betonung der Wehrhaftigkeit der Stadt (RPC VII 2, 1336, Triumphbogen; 1337–1338 Ares; 1351–1353 Stadttor; 1354–1357 Stadtbefestigung aus der Vogelperspektive). Menophilus wies in den folgenden, über 7 Monate geschickt geführten Verhandlungen die Forderungen der Karpen nach Subsidien zurück und sorgte so während dreier Jahre für Ruhe, ehe er vor Mai 241 abberufen wurde. Die Zivilstadt von Viminacium wurde 239 zur Colonia erhoben und eine Münzstätte zur Versorgung der Truppen mit den Aes-Prägungen P(rovincia M(oesia) S(uperioris) Col(onia) Vim(inacium) (vor allem Sesterzen/AE 1, dazu Dupondien/Asse) als Teil des Soldes eingerichtet; der Bezug auf das Heer wird durch die Wappentiere der Legionen VII Claudia und IV Flavia bzw. deren Standarten auf den Reversen deutlich (RPC VII 2, 71–72; IX, p. 57–58; Găzdac, Alföldy-Găzdac 2008; Mišk ec 2018; Stella 2018; Borić-Brešković, Vojvoda 2018; ferner s. u.). Ebenso wurden Viminacium-Prägungen zur Versorgung der Truppen mit Aes-Münzen nach Dakien und Pannonien gebracht. Die Prägungen liefen bis 254/5 und waren nur während der Usurpation des Pacatianus (Jahr X) unterbrochen, der eine umfangreiche Antoninianprägung veranlasste.

Der sasanidische Angriff in Nordmesopotamien im Frühling 239 (SEG 7, 743b; 30.4.239, Dura Europos) konnte abgewehrt werden; es folgte die 3. imperatorische Akklamation Gordians (ILS 500; 2. und 3. Akklamationen während trib. pot. III 10.12.238-9.12.239). Im Frühjahr 241 eroberte Ardašir I. das nun mit Rom verbündete Hatra; der folgende Vorstoß führte zum Verlust von Nisibis und Carrhae sowie der römischen Kontrolle über die Osrhoene.[3] Shapur folgte seinem Vater als Großkönig kurz nach der Eroberung von Hatra (babyl. 551= 12.4.240–1.4.241; CMC 18, 1–10; Strobel 1993, 224–225; Alram, Gyselen 2003, 149–152). Der Perserkrieg begann damit bereits 241 nach dem sasanidischen Vorstoß in die römische Provinz (SHA Gord. 23, 5) und der ersten Gegenoffensive Winter 241/241 (Inschrift von Abnūn, MacKenzie 1993; https:// sites. uci. edu/sasanika/abnūn-inscription; sie datiert noch vor den Tod Ardaširs vor März/April 242). Als Reaktion war es zu einer massiven Truppenverlegung in den Osten gekommen, wobei auch die stadtrömische Cohors II vigilum Philippiana am 25.8.241 sicher per Schiff transferiert wurde und erst am 23.12.244 nach Rom zurückkehrte (RMD Mainz 75). Die dem Kriegsschauplatz nächsten Legionen in den moesischen und dakischen Provinzen hatten zweifellos kriegsstarke Vexillationen zu entsenden (belegt XIII Gemina, IV Flavia, XI Claudia), jeweils verbunden mit Auxiliareinheiten. Der erste römische Erfolg noch vor dem Tode Ardaširs führte Ende 241 zur 4. imperatorischen Akklamation Gordians (trib. pot. IV, cos. II, 1.1.–9.12.241; noch mit imp. III ILAlg 2/2, 6872). Gordian III. selbst brach im Frühjahr 242 mit den Prätorianern und der Legio II Parthica von Rom auf und zog auf der großen Heeresstraße über Sirmium, Viminacium, Naissus und Hadrianopolis nach Perinthos und Byzanz (Goldmedaillon RIC 132; RPC VII 2, 580–581;

[3] Unrichtig Wiesehöfer 2008, 537; Huttner 2008, 178; in der bei Zonaras (12, 18) und Synkellos (443, 4–6 ed. Mosshammer) vorliegenden Tradition wird der Beginn der Regierung Shapurs I. fälschlich in der Regierungszeit des Maximinus angesetzt (Synk. 442, 16 ed. Mosshammer); entsprechend wird hier der sasanidische Gewinn von Carrhae und Nisibis unter Maximinus angesetzt. Selbstverständlich hätte der frühere Verlust wesentlicher Teile der mesopotamischen Provinz zum sofortigen Kriegsbeginn geführt. Zur Beruhigung der Soldaten und Prätorianer gedacht war die Ansage eines Germanen- und Partherkrieges durch Balbinus und Pupienus (SHA Max. Balb. 13, 5; unrichtig Herrmann 2013, 63-64). Der kilikische Statthalter hat entsprechend für die beiden in Tarsus für die Regierungszeit von nicht ganz 4 Monaten eine so singuläre massive und typenreiche Münzprägung veranlasst und dabei für Pupienus Partherkriegsreverstypen Caracallas wieder aufgegriffen; RPC VII 2, p. 546–549; Ziegler 2001/2002; die Thematik wird unter Gordian III. nicht fortgesetzt, der Kaiser als Nikephoros erscheint ab 242/243.

Zos. 1, 18, 2; SHA Gord. 26, 3–4, über Moesien), wo er im Frühsommer 242 nach Kleinasien übersetzte (RKT[6], 187-188; Huyse 1999; Winter, Dignas 2001, 93–97, 141–144; vgl. Huttner 2008, 185–188; teilweise korrekturbedürftig Herrmann 2013, 145–170). Auf dem Marsch schlossen sich die Aufgebote der pannonischen und germanischen Provinzheere an, ebenso wohl weitere in Viminacium wartende Kontingente aus Moesien und Dakien. Im Feldheer befanden sich bedeutende germanische und gotische Föderateneinheiten unter eigenen Offizieren aus dem jeweiligen Stammesadel. Die römische Gegenoffensive begann im Herbst 242, für die Erfolge nahm Gordian seine 6. imperatorische Akklamation an (SHA Gord. 26, 6, unrichtig die Angabe, Antiochia sei von den Persern besetzt gewesen; trib. pot. V cos. II imp. VI vor 9.12.242, ILAlg 2/2, 6513). Ein vermuteter erster Aufenthalt Gordians 239 in Antiochia bleibt ohne Grundlage (Halfmann 1986, 233–234; Herrmann 2013, 132–133; Brandt 2020).

Die Abberufung des Menophilus und die Truppenabzüge 241 und im Frühling 242 sahen die Karpen als Gelegenheit zu einem erneuten Einfall nach Untermoesien in das Hinterland der Küstenstädte; dieser wurde durch die zur Sicherung an der Donaulinie verbliebene Legio I Italica unter dem Oberbefehl des noch in Thrakien anwesenden Kaisers zerschlagen (SHA Gord. 26, 4; Biernacki, Sharankov 2018). Gordian nahm seine 5. imperatorische Akklamation an; die Bürger von Dionysopolis errichteten für Gordian in Novae im Hauptquartier der dabei für ihre Tapferkeit gerühmten I Italica eine Statue zum Dank der vom Kaiser bewirkten „Rettung aller".

Im Sommer 243 konnte Shapur I. in der Schlacht von Rhesaina geschlagen und zum Rückzug gezwungen werden (7. imperatorische Akklamation, CIL 8, 21559); der Vormarsch auf Ktesiphon im Herbst/Winter 243/244 endete jedoch in der römischen Niederlage bei Misichē im Februar 244 (RGDS § 6–7; Amm. 23, 5, 7.17; Strobel 1993, 218–219; verfehlt Körner 2002, 86–92, 97–98; auch Brandt 2021, 498–500, der erneut von einer sofortigen Reise des neuen Kaisers nach Rom mit Ankunft vor der Caesarerhebung des Philippus iunior (bereits belegt am 15.8.244, CJ 4, 29, 10) ausgeht, so auch RKT[6], 190; von einer längeren Dauer der Reise durch mehrere Provinzen nach Rom spricht Körner 2002, 94–96). Nach dem Tod des in der Schlacht tödlich verwundeten Gordian wurde der Prätorianerpräfekt M. Iulius Philippus vom Heer zum Kaiser ausgerufen (jedenfalls vor dem 14.3.244, CJ 3, 42, 6; in Oberägypten wird noch am 26.2.244 nach Gordian III. datiert, SB 5, 8487).

Nach seiner Kaisererhebung nahm Philippus unverzüglich Verhandlungen mit Shapur auf, kaufte die Gefangenen um 500.000 Aurei frei und schloss einen Frieden, der die Räumung der Provinz Mesopotamia, weitere Geldzahlungen und den Verzicht auf Einflussnahme in Armenien beinhaltete (Strobel 1993, 219–220). Das Heer konnte daraufhin ungehindert nach Nordmesopotamien zurückmarschieren, die vorgeschobenen Positionen am Euphrat wurden geräumt. Nach der Rückkehr in das durch Festungen geschützte nordmesopotamische Provinzgebiet und nach der Ankunft von Verstärkungen kündigte Philippus den Vertrag mit Shapur auf, dessen Versuch, römisches Gebiet zu besetzen, militärisch abgewiesen wurde. Der Großkönig musste in einem revidierten Friedensschluss den Status quo ante anerkennen, erhielt jedoch die Abmachungen hinsichtlich Armenien bestätigt, die von römischer Seite aber nicht eingehalten wurden. Erst mit der Eroberung Armeniens 252 konnte Shapur dort die Kontrolle gewinnen. Zweifellos ergingen nach der Niederlage bei Misichē Befehle an die nächststehenden Heere, so rasch als möglich Verstärkungen heranzuführen. Dies muss insbesondere die dakischen und moesischen Provinzen betroffen haben. Die Karpen nutzten diese nunmehr massive Reduzierung der Truppen an der unteren Donau im Sommer 244 zu einem massiven Einbruch in Dacia Inferior und Untermoesien (Strobel 2019a, 320–322; unrichtig Piso 2005; teilweise verfehlt bzw. überholt Körner 2002, 135–157). Auch Dacia Superior war bedroht. Es kam zu einer Fluchtbewegung über die Donau in den moesischen Raum, wie das Beispiel der Romula, der Mutter des Galerius (* ca. 250 nahe Serdica, später Felix Romuliana), zeigt (infestantibus Carpis, Lact. mort. pers. 9, 2). Ihr Name leitete sich offenkundig von der Colonia Romula, dem Hauptort der Dacia Malvensis ab. Nach dem Friedensschluss mit Shapur I. führte Philippus das Feldheer, darunter germanische und gotische Föderateneinheiten, 245 über Thrakien auf den Kriegsschauplatz; am 12.11. 245 befand er sich in dem strategisch wichtigen Aquae (Prahovo; Petrović 2018) mit seinem für die Logistik und den transdanuvischen Verkehr bedeutenden Donauhafen; eine andere Möglichkeit

wäre das bekannte Kurbad Aquae Calidae bei Anchialos (Die Goten machten dort bei einem begrenzten Einfall im Jahre 270 zur Erholung Station, Iord. Get 20, 108–109; kaum wahrscheinlich Aquae (Calan) in der Hatzeg-Ebene). Die untermoesischen und dakischen Provinzgebiete wurden gesäubert und 246 eine siegreiche Gegenoffensive tief in die karpischen Siedlungsgebiete in der Moldau-Region hinein geführt Zos. 1, 20, 1–2; CIL 3, 1054 = IDR 3/5, 171). Die Karpen wurden in offener Feldschacht besieg und zogen sich in eine große geschützte Befestigungsanlage[4] zurück, wo sie belagert wurden. Bei den Kämpfen ad castellum Carpiorum fiel ein Centurio der Prätorianer (RIU 5, 1155 = IDRE 2, 286). Ein Entsatz wie ein Ausfall der Karpen scheiterten, sie kapitulierten und ein neues Foedus unter Anerkennung der römischen Oberherrschaft wurde geschlossen. Die im Krieg bewährten Angehörigen der Prätorianerkohorten wurden bereits am 7.1.247 mit dem Conubium und dem Bürgerrecht für ihre Kinder belohnt (RMD 473; das Diplom zeigt eine deutliche Unsicherheit hinsichtlich der Titulatur des noch nicht in Rom anwesenden Kaisers), eine zweite Charge von Prätorianers wurde entsprechend am 7.1.248 privilegiert (RMD 474.475). Das Kriegsende ist somit auf Herbst 246 festzulegen. Die Stabilität der dakischen Provinzen war zurückgewonnen. Die Befestigungen an der Oltlinie wurden wiederhergestellt, die Colonia Romula durch den Bau einer Stadtmauer geschützt (CIL 3, 8031).

Zur Versorgung des dakischen Provinzheeres mit Sold in Bronzemünzen wurde 246/7 sehr wahrscheinlich in Apulum parallel zu Viminacium die Massenprägung von AE 1/Sesterzen mit der Legende PROVINCIA DACIA aufgenommen, wobei der Bezug auf das Heer durch die Standarten bzw. Wappentiere der beiden Legionen XIII Gemina und V Macedonica sowie die Präsenz der Münzen in den Militärlagern der Provinz augenfällig ist (40% der Gepräge des Philippus in Dakien; RPC IX, p. 42, 57–58, 68–69; Găzdac, Alföldy-Găzdac 2005; 2008; 2015; Cavagna 2012; zur Bedeutung von Sesterzen und Dupondien im monetären Umlauf des 3. Jh. etwa die großen Horte aus Gallien Trommenschlager, Groch 2014/2015; Meguelati2014/2015; Pilon 2014/2015; die Auflistung bei Varbanov 2021). Während für die obermoesischen Truppen ebenfalls Sold in Viminacium-Aes ausbezahlt wurde, wurden für Einheiten anderer Provinzen in Viminacium erstmals Antoniniane ausgeprägt, wobei das Personal, nach der Ähnlichkeit der Stempel mit Antiochia zu schließen, als Heeresmünzstätte aus dem Osten mitgeführt worden war (Fitz 1978, 611–684; 1994). Der Kaiser dürfte sich an der aus dem syrisch-levantinischen Raum bekannten Praxis orientiert haben, die Truppen mit den in Antiochia geprägten Tetradrachmen zu besolden, die den alltäglichen Geldverkehr der Region, allerdings auf diese beschränkt, bildeten (Sancinito 2017). Nur Truppen aus anderen Regionen wurden mit stadtrömischen und antiochenischen Antonianprägungen bezahlt. Der Finanzknappheit des Kaisers nach dem verlorenen Perserkrieg und den Donativen zum Regierungsantritt kam dies zweifellos entgegen.

Philippus kehrte nach dem siegreichen Ende des Karpenkrieges, der in der Diktion der Dexippos-Tradition als Skythenkrieg erscheint (Zonar. 12, 19, 584; SHA Max. Balb. 16, 3), und einer Inspektionsreise zumindest bis Aquincum (CIL 3, 3633 = AE 2002, 1186) im Sommer 247 nach Rom zurück, wo er im Spätsommer seinen Triumph feierte (Siegerbeiname Carpicus Maximus). Die glanzvolle 1000-Jahr-Feier Roms fand dann vom 21. bis 23.4.248 statt. Dass Dexippos in seiner Darstellung der Auseinandersetzungen mit den skythischen Barbarenvölkern auch die Karpenkriege beschrieben hat, belegen Euagr. h. e. 5, 24 und Photios bibl. 82 (T 5 und 6 ed. Martin). Dexippos bezeichnete alle Anrainer bzw. Gegner im östlicheren Bereich nördlich der Donau und des Schwarzen Meeres als Skythen bzw. skythische Völker, selbst die Iuthungen bei ihrem östlichen Einfall in Pannonien (F 28 ed. Martin).

Auf dem Balkan ließ Philippus in einer gewissen Parallele zur Stellung seines Bruders C. Iulius Priscus (Praefectus praetorio und rector orientis, zweifellos mit dem entsprechenden imperium maius; IGLS 15, 2, 429; P. Euphr. 1; Vervaet 2007, 134–137) seinen Schwager oder eher Schwiegervater (Marcius Otacilius?) Severianus zurück[5] mit einem provinzübergreifenden

[4] Es dürfte sich um eine wiederbenutzte große eisenzeitliche Befestigung in der Moldau-Region gehandelt haben; dazu Niculiţă, Zanoci 2004; Berzovan 2022.

[5] PIR² S 624; auch Gebhardt, Hartmann 2008, 1147, 1151; unrichtig datiert bei Körner 2002, 354.
Ihm waren aber sicher nicht nur Moesien und Makedonien ohne Thrakien übertragen; offensichtlich missverstanden bei Zos. 1, 19, 2.

Kommando von beiden moesischen Provinzen bis Makedonien zurück. Severianus war wie Philippus und Priscus sicher ritterlichen Ranges. Dies führte offensichtlich zu Spannungen mit den Kommandeuren und konsularen Legaten in Moesien, wo sich Ti. Claudius Marinus Pacatianus[6] zum Kaiser ausrufen ließ; Pannonien, genauer Pannonia Inferior bzw. die Legio II in Aquincum, schloss sich der Usurpation an (Zos. 1, 20, 2, erhoben von den moesischen und pannonischen Heeren; 21, 2). Zonar. 12, 19, 584 bezeichnet ihn als Truppenkommandeur; sehr wahrscheinlich war Pacatianus, der aus einer senatorischen Familie stammte, aber konsularer Statthalter von Moesia Superior (IGLS 13, 1, 9077; CIL 3, 94 et p. 969; PIR² C 929–930; 1030 mit PIR² VII 2, 2006, p. 290). Das genaue Datum der Usurpation lässt sich nicht ermitteln; wahrscheinlich ist der Winter 248/249. Die Soldaten waren vermutlich über ein ungenügendes Donativ am Ende des Karpenkrieges und anlässlich des 1000-Jahr-Jubiläums erzürnt. Es kommt hinzu, dass der Sold für die in Dakien garnisonierenden Truppen wohl großenteils mit den PROVINCIA DACIA-Sesterzen/AE 1-Massenprägungen von 246/7 ausbezahlt wurde, ebenso in Moesia Superior mit den P(rovincia) Moesia) S(uperior) Col(onia) VIM(inacium)- Prägungen, Jahr VIII. Es kann angenommen werden, dass Pacatianus in einem persönlichen Konflikt Severianus von seinen Soldaten töten ließ. Pacatianus setzte sich in den Besitz der Münze von Viminacium und ließ dort Antoniniane emittieren[7]. Auf die Revolte des Pacatianus hin wurden von Philippus, wie mit gutem Grund anzunehmen ist, kampfstarke Legionsvexillationen aus Vindobona und Carnuntum und vielleicht auch aus Brigetio zur Verteidigung Italiens gegen einen zu erwartenden Vormarsch des Pacatianus heranbeordert, die das Vorfeld der Iulischen Alpen auf direktem Weg erreichen konnten. Sie dürften sich nach einer erneuten Vereidigung auf die Philippi unter Zurücklassung der rückwärtigen Dienste, Rekrutenverbänden und Wach- und Arbeitsvexillationen unverzüglich in Marsch gesetzt haben. Allerdings wurde Pacatianus bereits nach kurzer Zeit von den eigenen Soldaten ermordet, wahrscheinlich auf die Nachricht von der Beauftragung des hoch angesehenen, aus Budalia bei Sirmium stammenden C. Messius Quintus Decius Valerinus (RKT⁶, 195–199) mit einem Oberkommando über die beiden pannonischen und moesischen Provinzen und über ein begleitendes Feldheer durch Philippus (Zos. 1, 21, 2).[8] Decius war 232–234 Statthalter in Moesia Inferior gewesen (Sharankov 2020).

Nach der Überlieferung habe Decius die Ernennung zuerst ausgeschlagen, sei dann unter direkter Verpflichtung zuerst gegen die Anhänger des Pacatianus nach Unterpannonien in Marsch gesetzt worden (Zos. 1,21, 2).[9] Nach der Ermordung des Pacatianus haben die herangeführten kriegsstarken Legionsvexillationen zweifellos die Begleittruppe des Decius gebildet, als er im Frühling 249 mit der Aufgabe der Wiederherstellung der Loyalität und Ordnung der Truppen und der Bestrafung der Anführer der Meuterei an die Donau marschierte. Als Decius in Unterpannonien gegen die Schuldigen disziplinarisch vorgehen ließ, riefen ihn die Soldaten zu ihrem Schutz zum Kaiser aus (Zos. 1, 21, 3); Decius habe nur auf Grund der Gefahr für sein Leben dies angenommen (Zos. 1, 22, 1; noch apologetischer Zonar. 12, 19), eine typische Verteidigungsstrategie von Usurpatoren (zur Topik der recusatio Huttner 2004, bes. 200–203). Realiter hat er den Verantwortlichen, wie anzunehmen ist, Straffreiheit versprochen. Gleiches ist für Moesia Superior

[6] RKT⁶ 193; PIR² P 4. 6; Körner 2002, 282–288, 347–348, sicher nicht nur Militärtribun; Münzprägung RIC IV 3, p. 65f., 104f. Unrichtig Gerhardt, Hartmann 2008, 1161 mit der Annahme eines provinzübergreifenden Sonderkommandos über beide Pannonien und beide Moesien, ebenso Piso 2014, 133. Zu den Problemen der Hierarchie auch Piso 2014. Vgl. zur Trennung von multi-provinzialen Statthalterschaften und supra-provinzialen Kommanden mit entsprechendem übergeordneten Imperium Vervaet 2007.

[7] Die Usurpation des Iotapianus im Osten (Zos. 1, 20, 2; Aur. Vict. Caes. 29, 2; Polem Silv. 38) war Teil einer Revolte gegen die Herrschaft des Iulius Priscus und führte um Ostern 249 in Alexandria zum Ausbruch eines blutigen Bürgerkrieges, in dem der amtierende Praefectus Aegypti loyal zu den Philippi stand (Strobel 1993, 191– 195). Die Usurpation endete mit der Ermordung Iotapians; sein Kopf wurde dem inzwischen in Rom eingezogenen Decius wohl im Oktober 249 überbracht.

[8] Die Annahme eines Usurpators „Sponsianus" in Dakien beruht nur auf einer Münzfälschung des 17. Jh. (A. Bursche, K. Myzgin, Spansiani gold: ancient or modern?, Nomisma 2023).

[9] Die bei Zosimos und Zonaras geschilderten Überlegungen des Decius und Philippus gehen offenkundig auf eine gemeinsame Quelle zurück, die diese literarische Fiktion tradierte, die auf den Profanhistoriker Eusebios, den Rhetor und Historiker Philostratos von Athen oder auch Dexippos zurückgehen kann.

aus dem Anschluss der VII Claudia in Viminacium zu erschließen. Der Usurpation schlossen sich außerdem die Decius begleitenden pannonischen Vexillationen an, die Legionen in den Heimatstandorten folgten auf diese Nachricht hin. In der ex voto-Weihung vom 28.5.249 (CIL 3, 4558 = CBI 362 = HD 72247)[10] trägt die Legio X Gemina in Vindobona bereits den entsprechend verliehenen Ehrenbeinamen Deciana. Die Ausrufung des Decius zum Kaiser durch die Soldaten sehr wahrscheinlich in Aquincum (Pannonien als Ort der Usurpation Zos. 1, 21, 2–3) und der Anschluss der pannonischen Legionen müssen zuvor erfolgt sein. Die Unterstützung seiner Usurpation durch die pannonischen und dakischen Provinzen wie durch den exercitus Illyricianus feierte Decius‘ erste Emission (Rom 249; RIC 1–5) in Aurei und Antoninianen zusammen mit dem Adventus in Rom. Allerdings musste Decius vor dem Marsch auf Rom seine Anerkennung bei den untermoesischen Truppen mit militärischen Mitteln durchsetzen, deren Vexillationen sich weigerten, die nach der Ermordung Pacatians wieder angebrachten Bildnisse der Philippi abzunehmen; gegen sie wurde die Legio VII Claudia aus Viminacium in Marsch gesetzt, wobei es zu Kampfhandlungen kam und schließlich die Eradierung der Philippi durchgesetzt werden konnte (AE 1949, 201 = TitAqu 213). Insgesamt musste die Disziplin der Truppen wiederhergestellt werden, wofür Decius auf der Ehreninschrift aus Oescus im Herbst 249 als Wiederhersteller der militärischen Disziplin gefeiert wurde (CIL 3, 12351 reparator disciplinae militaris, fundator sacrae Urbis, firmator spei Romanae). In dieser Inschrift trägt Decius wie in seiner ersten Emission schon das Cognomen Traianus. Iord. Get. 90 berichtet, Decius habe Soldaten aus dem Dienst entlassen, und diese seien darüber verärgert zum Gotenkönig Ostrogotha – realiter zu König Kniva - geflüchtet, um dort Hilfe zu suchen. Es ist anzunehmen, dass zuerst Angehörige der sich gegen Decius stellenden untermoesischen Einheiten über die Donau geflohen sind, denen dann die wegen ihrer Insubordination unehrenhaft Entlassenen gefolgt sind.

Philippus mobilisierte seinerseits eine zahlenmäßig überlegene Streitmacht (Zos. 1, 22), neben den italischen Verbänden (Prätorianer, II Parthica) sicher die nahestehenden obergermanischen und rätischen Legionen, und sammelte seine Streitkräfte in Oberitalien. Der mit einem Heer rasch vorstoßende Decius konnte Philippus in einer Schlacht bei Verona schlagen; Philippus wurde nach der Niederlage von seinen Soldaten, die zu Decius übergingen, getötet; die verbliebenen Prätorianer in Rom schlossen sich Decius an und töteten Philippus Junior, Mitaugustus seit Juli/ August 247.[11] Da für Decius erst nach dem 29.8.249 in Alexandria Münzen geprägt wurden, kann

[10] Fortunae Conse(rvatrici) / Genioq(ue) huius loci / in honor(em) T(iti) EI[3]IIVN / Tiberianici tr(ibuni) / mil(itum) leg(ionis) X G(eminae) P(iae) <F=P>(idelis) <D=F>ec(ianae) / T[i(berius)] Cl(audius) Valentinu[s 3] / cornicul(arius) la[tic(lavii)] / ex voto [pos]ui[t] / V <K=I>al(endas) Iun(ias) Aemili(ano) / et Aquilin(o) co(n)s(ulibus) // Nom(ina) bb(ene)f(iciariorum) la[tic(lavii)] / [3]lavaci[3]o / [3]uravallaus / Ge[3]ma[3] / F[3]av[3]inus / Sibi[3]co[3] / [3] Potens / [3] Iustinus / [3]Osim(u?)s COC. Die verlorene, von Lazius abgeschriebene Weihung zu Ehren des Tribunen durch den Cornicularius des Büros des Tribunen im Namen der Beneficiarier des Büros war offensichtlich teilweise schwer lesbar bzw. lückenhaft und wurde von Lazius durch seine Lesung mehrfach verfälscht; vgl. Weber 2021, 398. In Z. 5 erscheint so als Legionsname LEG X G P P FEC, das zweite P ist zweifellos ein verlesenes F, aus dem +EC machte Lazius die ihm geläufige Formel fec(it). An der Lesung als Leg(io) X G(emina) p(ia) f(idelis) Deciana ist festzuhalten.

[11] Origo gentis Romanorum 66 ed. Stein, Nickbakht mit p. 3-5 (geht der EKG voraus); Aur. Vict. Caes. 28, 10–11; Eutr. 9, 3; Epit. de Caes. 28, 1–3; Hier. chron. 218b; Zos. 1, 22, 1–3; Zonar.12, 19, 584; ausführlich Körner 2002, 305–322; Pfund 2021, 273–275; auch Huttner 2008, 201–203. Die übereinstimmende Tradition des Todes bei Verona bzw. im Prätorianerlager geht auf die EKG zurück. Gänzlich abweichende Berichte bei Ioh. Ant. 226 (ed. Roberto) – Revolte des Decius in Rom, wird dort zum Kaiser ausgerufen, die Philippi sind von einem Skythensieg kommend in Perinthos, Ermordung in Beroē. Nochmals abweichend Iohannes Malalas, wo aber aus Konst. Porphyrog., Exc. de insidiis 159, 22–28, wo der Kaiser mit seinen Söhnen in Rom bei einem Bürgerkrieg getötet wird, und Theod. Skut. p. VII 37, 5 Sathas, wo Decius von seinem Heer erhoben wird, Philippus mit einem gewaltigen Heer gegen ihn zieht, in der Schlacht unterliegt und nach Rom flüchtet, rekonstruiert wird (ed. J. Thurn, M. Meier, p. 301–302, 307). Dazu Menella 2017, bes. 78–84 zur Textlücke zwischen Caracalla und Aemilianus; zu den Exc. de insidiis Carolla 2016. Die von Dušanić 1976 aufgestellte These, Philippus sei, Ioh. Ant. folgend, in Beroia in Thrakien ermordet worden, sein Sohn habe zuerst allein und dann mit Decius geherrscht, ehe er Ende 249 von diesem ermordet worden wäre, ist ohne Grundlage; dazu Körner 2002, 312–320. Alternativ wird mit

seine Anerkennung in Rom und anschließend in Ägypten erst im September 249 erfolgt sein (vgl. auch Peachin 1990, 30–31; Burgess 2014, 73–34). Die Schlacht fand sehr wahrscheinlich eher in der ersten Septemberhälfte 249 statt, die Ermordung des Philippus Senior kurz danach, die Anerkennung in Rom jedenfalls vor dem 16.10.249 (CJ 10, 16, 3); Bithynien erreichte die Nachricht nach dem 23.9.249, kurze Zeit später die Erweiterung der Titulatur um das Cognomen Traianus (Haensch, Weiß 2014; problematisch Piso 2019 (verkörpere den Widerstandsgeist der danuvischen Legionen), aber auch zur Chronologie). Nach dem Befund der alexandrinischen Reichsprägung war Iulius Philippus noch nach dem 29.8.249 in Alexandria anerkannt. In Ägypten wurde in der Oxyrhynchites noch am 22.9.249 nach den beiden Philippi datiert (P. Rend. Harris 80); das früheste Zeugnis für Decius datiert auf den 28.11.249; auch der Praefectus Aegypti Aurelius Appius Sabinus stand noch Mitte September 249 loyal zu Philippus (Strobel 1993, 191). Seinen Sohn Herennius Etruscus sandte Decius zur Sicherung der Loyalität der Truppen an die Donau (Aur. Vict. Caes. 29, 1, allerdings nicht erst nach dessen Caesar-Erhebung). Fiktiv ist die Darstellung des Endes der Philippi bei Iohannes Antiochenus (Frg. 226 ed. Roberto), ein fiktives Konstrukt aus Eutrop und einer weiteren, unbekannten Vorlage; der angebliche Tod des Kaisers in Beroia (Thrakien?, Makedonien?) ist eine Verschreibung von Berōnē in der griechischen Version des Eutrop für Verona zu Beroē.[12] Die bei Ioh. Ant. greifbare unrichtige Tradition, Decius' Usurpation habe in Rom stattgefunden, entwickelte sich aber bei Cassiodor-Iordanes zur Erzählung, Decius sei von Philippus gegen einen ersten Einfall des Ostrogotha an die Donau geschickt worden und nach seinem Scheitern nach Rom zum Kaiser zurückgekehrt (Get. 90).

### III. Der Gotenkrieg des Decius

Chronologisch ist die Festlegung des Todes des Decius von zentraler Bedeutung. Während die Angabe SHA Val. 5, 4 fiktiv ist, wird Decius am 9.6.251 in Rom noch als lebend angesehen (Weihung, Basis Atrium Vestae CIL 6, 31129). Am 24.6.251 hatte der Senat die Divinisierung des Decius und seines Sohnes Volusianus bereits vollzogen (CIL 6, 36760 divo Decio III et divo Herennio co(n)s(ulibus); dazu Strobel 1993, 232). Konkret ist die Weihung des Altares für I(upiter) O(ptimus) M(aximus) T(eutanus) durch die Duoviri der Colonia Aquincum am 11.6.251 (I.Bölcske 8 = AE 2003, 1415). Diese offizielle Weihung der Colonia mit der pro salute-Widmung für Trebonianus Gallus und Hostilianus, den jüngeren Sohn des Decius, als Augusti ist durch divis Decci(i)s co(n)s(ulibus) jahresdatiert.[13] Die Nachricht kam, wie mit gutem Grund anzunehmen ist, nicht erst am Tag der feierlichen Zeremonie für Iupiter Teutanus mit Weihung des Altares am 11.6. ins Hauptquartier des unterpannonischen Statthalters; letzterer musste sich zudem erst für die Akzeptierung der einseitig gefällten Nachfolgeordnung entscheiden und die Soldaten der II Adiutrix auf die neuen Augusti vereidigen. Die Eilmeldung dürfte spätestens am 6./7.6.251 in Aquincum gewesen sein. Deren Dauer ergibt bei einer Botenroute von dem Raum Durostorum/

Bezug auf Ioh. Ant. das makedonische Beroia als Schauplatz der Ermordung vermutet oder eine Schlacht beim thrakischen oder makedonischen Beroia.

[12] Strobel 1993, 191–194; Banchich 2009, 8–9; Mecella 2017, 80–86; zu Ioann. Antioch. allgemein Treadgold 2007, 311–329; Roberto 2005, XI–CLXVIII, zur Quellenfrage CXXV–CLVII; Roberto 2016. Zur Problematik der unzuverlässigen Malalas-Überlieferung und –tradition allgemein Treadgold 2007, 235–256; zu Cedrenus Tartaglia 2014, bes. 19–23 (Quellenfragen).

[13] Vgl. hierzu Toth 2003a (unrichtig, dass Gallus Hostilian zum Caesar und anschließend der Senat zum Augustus erhoben habe); ebenfalls zu der Inschrift Kovács 2015 (spätestens Mitte Mai); nicht überzeugend dazu Eck 2016, 496, Anm. 20. Sowohl Toth wie Kovacs und Eck gehen noch davon aus, dass Decius und Herennius Etruscus gemeinsam in der Schlacht von Abritus gefallen sind. Zum Fest des Iupiter Optimus Maximus Teutanus Toth 2003b.
Entgegen Toths Kalkulation der Zeitspannen (von Sexaginta Prista nach Aquincum 8–9 Tage, die Schlacht 25.5./1.6.251) kann die Nachricht nicht vom Schlachtfeld ausgegangen sein. O Bodl. 2, 1633 datiert in Theben am 30.6.251 nach dem zweiten Jahr unserer Herren, der Decii und des Quintus (= Hostilian), Augusti. Die Augustuserhebung des Hostilian unter Decius war bekannt, der Tod des Herennius, da nicht divinisiert, in der Datierungsformel nicht berücksichtigt. Meldungen aus Rom erreichten Oberägypten, nachdem von Praefectus Aegypti weitergeleitet, meist in 4–6 Wochen (Rathbone 1986).

Marcianopolis aus, wo sich Trebonianus Gallus sehr wahrscheinlich in Wartestellung befand, etwa 10 Tage; dazu kommt die Zeitspanne zwischen Schlacht und Etablierung der Nachfolgeordnung durch Gallus und das ihn begleitende untermoesische Heer von mindestens 2, eher 3 Tagen. Die Nachricht nach Rom dürfte von Marcianopolis angesichts der schwierigen Sicherheitslage in Untermoesien und Thrakien einschließlich der Überfahrt über die Adria mehr als 15 Tage benötigt haben. Der kurzfristige Zusammentritt des Senats und die Akklamation durch die Prätorianer und das Volk konnten nötigenfalls in 2 Tagen bewerkstelligt werden. Dies ergibt für den Tod des Decius ein Datum um den 20./22.5., für die Ausrufung des Trebonianus Gallus um den 23./25.5.251. In seiner Ansprache an das Heer hatte Gallus die Tapferkeit der beiden gefallenen Augusti gelobt (Aur. Vict. Caes. 29, 5); es ist davon auszugehen, dass er dabei ihre Divinisierung proklamierte, nicht anders als Hadrian beim Tode Traians (dazu Strobel 2019b, 479; unrichtig Kovács 2015, 311, der eine Divinisierung durch den Senat und eine entsprechende Meldung nach Aquincum voraussetzt; Mitthof 2020, 330-331 datiert die Schlacht auf den 15.5., was aber mit dem Datum 9.6. in Rom nicht in Einklang zu bringen ist.).

Für die Regierungsdauer des Decius (Zusammenstellung der Überlieferung bei Burgess 2014, 74–76) gibt die Origo gentis Romanorum 67 (ed. Nickbakht, Stein) die scheinbar exakte Angabe 1 Jahr 11 Monate, 18 Tage, allerdings sind die Tagesangaben durchgehend fiktiv (Burgess 2014, bes. 115–117, 191–192). Die Tradition der EKG (Aur. Vict. Caes. 29, 4; Eutr. 9, 4) nennt 2 Jahre, Euseb. HE 7, 1 nicht ganz 2 Jahre (dagegen Euseb. (Hieron.) Chron. 218, 7-8 (ed. Helm) 1 Jahr 3 Monate); Epit. de Caes. 29, 1 bringt 2 Jahre 6 Monate; Syncell. 683, p. 445, 3 (ed. Mosshammer) 2 Jahre (nach der von ihm benutzten Dexippos-Epitome für Gallus unrichtig 18 Monate, offensichtlich eine Verschreibung von 28 zu 18 Monaten), dann aber wird ausgeführt, dass andere 3 Jahre, andere wiederum 2 Jahre nennen (Syncell. 706, p. 459, 15–16). Euseb. (Hieron.) chron. 218, 21–23 gibt für Gallus und Volusianus 2 Jahre 4 Monate, was mit der Zeit Mai 251 bis Anfang August 253 relativ übereinstimmt, in der Kirchengeschichte dagegen nicht ganz 2 Jahre. In der Übersetzung des Hieronymus bzw. deren Texttradition ist es für Decius wahrscheinlich zu einer Verschreibung gekommen, ann. I mens. III statt ann. I mens. VIIII, wie in Syn. chron. Sathas A. 37.23.

Das Grundschema der Darstellung des Dexippos, allerdings in seiner Chronik, findet sich in dem stark verkürzenden Exzerpt des Synkellos in dessen Ecloga chronographica (Syncell. p. 459, 705, 5–16 ed. Mosshammer = Dexipp. F 17 ed. Martin = F 23 ed. Mecella), der aber nur eine Epitome des Dexippeischen Chronik kannte, wie die Verwechslung von Volusianus und Hostilianus und das Fehlen weiterer Informationen zu Trebonianus Gallus zeigen (Die Legionen rufen nach dem Tod des Decius Gallus, einen ehemaligen Konsul, und Volusianus, den Sohn des Decius zum Kaiser aus, beide regieren für 18 Monate, ohne nennenswertes zu vollbringen): Die Goten genannten Skythen haben in großer Zahl den Ister überschritten und sind in die römische Provinz eingefallen. Sie schließen die sich nach Nikopolis ad Istrum flüchtenden Mösier dort ein. Decius greift die Skythen an und tötet 30.000. Decius unterliegt in einer weiteren Schlacht und verliert deshalb Philippopolis, das die Skythen einnehmen und viele Thraker töten. Decius greift die Skythen auf ihrem Rückweg in die eigenen Gebiete an und wird bei Abritus, bei dem Forum Thembronium genannten Ort, zusammen mit seinem Sohn getötet. Die Skythen kehren mit einer großen Menge an Kriegsgefangenen und Beute heim.

Der Bericht bei Aurelius Victor (Caes. 29, 4–5) gibt unrichtig an, dass die Decier bei der Verfolgung der gotischen Invasoren über die Donau durch List ums Leben gekommen seien. Herennius sei bei seinem allzu kühnen Vordringen in der Schlacht gefallen, in gleicher Weise Decius, der nach dem Tod des Sohnes auf die Tröstungen durch die Soldaten hin den Krieg wiederaufgenommen habe. Der Tod des Herennius wird deutlich von jenem des Decius in der Schlacht getrennt. Auch Oros. 7, 21, 3 lokalisiert den Tod der Decier im Barbarenland. Epit. de Caes. 29, 3 lässt Decius ebenfalls im Barbarenland fallen; er sei inmitten des Chaos des Kampfes in einem Sumpfloch untergegangen, so dass seine Leiche nicht gefunden werden konnte. Auch sein Sohn sei in diesem Krieg umgekommen. Bei Eutr. 9, 4 werden Decius und sein Sohn im Barbarenland getötet. Diese Überlieferung geht auf die gemeinsame Benutzung der EKG zurück, wobei der Tod des Herennius von jenem des Decius getrennt ist, wie auch die Formulierung bei

Epit. de Caes. 29, 3 zeigt; Eutrop seinerseits formuliert rein summarisch. Die gegenüber Gallus feindlich eingestellte und Decius als hervorragenden Kaiser und Feldherrn herausstellende sowie den Tod der Decier verherrlichende Tradition der EKG schreibt die Niederlage und den Tod des Decius dem Verrat des Trebonianus Gallus zu (Aur.Vict. Caes. 29, 4; Epit de Caes. 29, 2). Die Tatsache, dass erstmals in der Geschichte ein ‚Barbarenhaufen' den Kaiser mit seinem Heer vernichtet hatte, war angesichts der omnipräsenten römischen Siegesideologie und dem Selbstverständnis der eigenen Überlegenheit kaum zu akzeptieren; man suchte nach einer internen Erklärung. So wurde auch der Tod Gordians III. im Krieg gegen Shapur I. in Folge der Niederlage von Misichē/Pērōz Šāhpuhr als Intrige des Prätorianerpräfekten Iulius Philippus dargestellt (Eutr. 9, 2, 3; 9, 3; Aur. Vict. Caes. 27, 8; Epit. de Caes. 27, 2). Die Anschuldigung gegen Gallus übernimmt Zos. 1, 23. Seine detaillierte Beschreibung der Schlacht geht dabei zweifellos auf Dexippos zurück; die schweren geographischen Fehler (Tanais statt Ister) und das Missverstehen des Schlachtenerlaufs, ebenso die Widersprüche hinsichtlich der Rolle des Gallus müssen aber einer Zwischenquelle zugeschrieben werden, die als Epitome der Dexippeischen Chronik zu identifizieren ist. Wahrscheinlich hatte Dexippos die Gerüchte um einen Verrat des Trebonianus Gallus erwähnt. Nach Zosimos (1, 23–24) haben die Skythen den Tanais, also den Don (!), überschritten und Thrakien geplündert. Decius zog gegen sie, besiegte sie in allen Schlachten und nahm ihnen auch die Beute ab. Um sie gänzlich zu vernichten, suchte er ihnen den Rückweg abzuschneiden. Er ließ deshalb Gallus mit einer ausreichenden Heeresgruppe am Steilufer des Tanais zurück und griff selbst die noch übrigen Gegner an. Gallus habe an Umsturz gedacht und mit den Barbaren Verbindung aufgenommen, um sie in das Komplott gegen Decius einzubinden: Gallus bleibt am Ufer des Tanais, die Skythen teilen ihr Heer in drei Abteilungen und stellen die erste an einem Ort auf, dem ein Morast vorgelagert ist. Decius reibt die Mehrzahl der Krieger dieser Gruppe auf, dann kommt das zweite Treffen heran, das in die Flucht geschlagen wird. Dann zeigt sich ein kleiner Teil des dritten Treffens beim Sumpf; Gallus habe Decius ein Zeichen gegeben, er möge durch den Morast angreifen; Decius, der die Örtlichkeit nicht kennt, rückt unüberlegt vor, bleibt mit seinen Soldaten im Schlamm stecken und fällt unter dem allseitigen Beschuss durch die Barbaren mitsamt seiner Begleitung. Niemand sei entkommen. Gallus habe seinen Sohn Volusianus zum Mitkaiser bestellt und erklärt, dass Decius am Debakel selbst schuld gewesen sei. Er läßt die Barbaren mit ihrer Beute abziehen und verpflichtet sich zu jährlichen Zahlungen. Auch die Gefangenen, die meisten aus der Einnahme von Philippopolis und vornehmer Herkunft, dürfen sie mitführen.

Wesentlich ist hier, dass die Schlacht von Abritus allein mit dem Tod des Decius verbunden bleibt. Der auf Dexippos zurückgehende Bericht wird durch Amm. 31, 13 präzisiert, der die Skythika benutzte; er referiert den Tod des Decius kurz im Rahmen der Darstellung der Katastrophe von Adrianopel, da auch dort die Leiche des Valens nicht gefunden wurde. Demnach ging das Pferd des Decius im heftigen Kampf durch, der Kaiser stürzte in den Sumpf, konnte sich nicht mehr herausarbeiten und wurde nicht mehr gefunden. Eine summarische Zusammenfassung der wechselvollen Kämpfe bis zu den Siegen des Claudius II. und Aurelians nach Dexippos bietet Amm. 31, 5, 15–17, allerdings in einer freien Reihenfolge; auch hier wird der Tod des Decius und seines Sohnes im Kampf mit den skythischen Barbaren genannt. Bei Zonar. 12, 20–21, 589, dessen Benutzung spätantiker bzw. frühbyzantinischer Quellentraditionen noch nicht geklärt ist (Banchich 2009; van Hoof, van Nuffelen 2020, 37–53, bes. 39–49, Virius Nicomachus Flavianus?), starb Decius, der Christenverfolger schmachvoll: Als die Barbaren den Bosporus plünderten – offensichtlich eine Verwechslung mit späteren Einfällen -, griff sie Decius an und tötete viele. Die Barbaren hätten unter diesem Druck die Herausgabe ihrer Beute gegen freien Abzug angeboten. Decius habe abgelehnt und den Senator Gallus auf der Route ihres Rückmarsches positioniert. Dieser habe Decius verraten und den Barbaren vorgeschlagen, sich an einem nahen tiefen Sumpf aufzustellen. Diese hätten sich dann zur Flucht gewandt und Decius habe sie verfolgt. Decius, sein Sohn und viele Römer seien in den Sumpf gefallen und umgekommen; ihre Leichen seien im Morast nicht mehr gefunden worden. Dann sei Gallus an die Macht gekommen und habe einen

Vertrag mit den Barbaren geschlossen, die gegen jährliche Tributzahlungen auf die Plünderung römischen Gebietes verzichten sollten. Wesentliche Ergänzung ist hier die Nachricht, dass die Goten Verhandlungen angeboten haben. Bei Zonaras kommen Decius und sein Sohn im Gegensatz zu der bisher vorgestellten Tradition gemeinsam im Morast um, wohl eine Kombination mit der summarischen Angabe in der griechischen Übersetzung des Eutrop (Auch Iord. Rom. 284 cum filio suo crudeli morte occubuit Abritto).

Der anonyme Autor der Schrift De mortibus persecutorum (grundlegend Rougé, De Decker 2013, bes 361–459; die Zuordnung des anonym überlieferten Manuskripts zu Lactanz erfolgte willkürlich), die ganz der politisch-rhetorischen Polemik verpflichtet ist, kann der höheren Verwaltungsebene der Tetrarchenhöfen zugerechnet werden; 303 war er am Hof Diocletians in Nikomedeia. Die Schrift wurde offensichtlich im Westen am Hofe Constantins I. nach dem Sieg des Licinius über Maximinus Daia und wohl kurz vor dem Ausbruch des Krieges mit Licinius 316 n. Chr. verfasst. Es ist als Auftragswerk der Propaganda Constantins gegenüber heidnischen Kreisen in der gesellschaftlichen Elite, der Administration und des höheren Offizierskorps zu sehen und spiegelt gerade für die Tetrarchie ein offizielles Geschichtsbild. Nach der Version in mort. pers. 4, 3 ist die Bestie Decius in den Krieg gegen die Karpen aufgebrochen, die damals Dakien und Moesien besetzt hatten, was mit dem Beginn des Krieges in Einklang steht. Und sogleich sei er von Barbaren umzingelt und mit dem Großteil des Heeres vernichtet worden; auch habe er nicht die Ehre einer Bestattung erhalten können, sondern sei ausgeraubt und nackt, wie es sich für einen Feind Gottes gehöre, den wilden Tieren und Vögeln zum Fraß dagelegen. Wesentlich ist die zuverlässige Information, dass Decius zu einer expeditio Carpica aufgebrochen ist. Die Auseinandersetzung mit den Goten entwickelte sich also erst sekundär. Dass Decius dann im Kampf gegen die Goten gefallen ist, war natürlich in den Büros des Kaiserhofes ebenso bekannt wie bei dem angesprochenen Publikum. Auch sagt der Autor eben nicht, dass Decius von den Karpen getötet worden wäre; wer die barbari waren, konnte der Autor als bekannt voraussetzen. In die Irre geht Boteva, die eine maßgebliche Rolle der Karpen bei der Niederlage des Decius postulieren möchte (insgesamt problematisch Boteva 2020; überholt Boteva 2001; ihre Rekonstruktion ist nicht haltbar).

Im Strategiehandbuch des Kaisers Maurikios wird die Schlacht von Abritus als ein taktisches Paradebeispiel für den Hinterhalt von beiden Seiten genannt (strat. 4, 3, Z. 23–34 p. 196, ed. Dennis). Zuvor wird die Taktik beschrieben, einen großen Graben anzulegen und zu tarnen, wobei markierte Landbrücken für die eigenen Soldaten stehen bleiben. Auf beiden Seiten werden Einheiten versteckt, die anderen vor dem Graben in Linie aufgestellt. Diese täuschen eine Niederlage vor und ziehen sich in verstellter Flucht auf den Übergängen zurück. Der Feind beginnt eine ungestüme Verfolgung der vermeintlich Fliehenden und stürzt in den Graben. Die Einheiten machen kehrt, die verborgenen Einheiten zu beiden Seiten stoßen vor. Die Feinde im Graben werden getötet, die anderen fliehen ob des unerwarteten Desasters ungeordnet und werden verfolgt und getötet. So hatten die Hephthaliden den Sasaniden Peroz 438 n. Chr. besiegt. Allerdings bedürfe diese Form des Hinterhaltes viel Zeit und viele Arbeiter und könne auch vom Feind erkannt werden (strat. 4, 3, Z. 1–23). Das gleiche könne mit einem Sumpf erreicht werden. Der Kommandeur legt zwei bis drei feste Wege durch den Sumpf für die eigenen Soldaten an. Die Truppen werden vor dem Sumpf aufgestellt, täuschen bei Beginn der Schlacht eine Flucht durch den Sumpf vor, der stürmisch nachstoßende Feind fällt in den Morast, die Soldaten machen kehrt und die auf beiden Seiten versteckten Einheiten stoßen vor und der Feind wird vernichtet. Wie der Autor des Handbuches bemerkt, haben die skythischen Stämme der Goten diese Taktik gegen Decius angewandt. Zuvor habe Decius die Strategie der verstellten Flucht bzw. des vorgetäuschten Rückzuges selbst angewandt und viele dieser Feinde getötet, was heute auf die Schlacht gegen Ostrogotha bezogen werden kann.

Hinsichtlich der Darstellung in Iordanes' Getica (dazu Van Hoof, Van Nuffelen 2017; Van Nuffelen, Van Hoof 2020, 2–99), der hier im wesentlichen Cassiodors Origo Gotica, das Auftragswerk für den Amaler Theoderich, übernommen haben dürfte, sind auf Grund des Wiener Dexippos-Palimpsests (Transkription sowie verbesserte Lesung von F 23 bei Martin, Grusková 2020) die folgenden grundsätzlichen Korrekturen anzubringen, insbesondere hinsichtlich der

fiktiven Gestalt des Amalers Ostrogotha (dazu Wolfram 2020): König der Goten war 250 Kniva (basileus), nicht Ostrogotha (ein geläufiger Prunkname „Glanzgote"), der nur Führer (archōn) eines ethnisch nicht einheitlichen Heerhaufens gewesen ist; das Konstrukt des Amaler-Heros Ostrogotha bei Cassiodor-Iordanes ist fiktiv (Get. 78–81, 82, 90–103; Cassiod. var. 9, 1, 19; zu den unterschiedlichen Genealogien, einmal mit Ansatz um 250, dann um 326 Wolfram 2020, 21). Kniva war nicht der Nachfolger nach dem Tod des ‚Amalerkönigs Ostrogotha', wie Get. 101 behauptet. Beide gotischen Heerführer, König Kniva und Ostrogotha operierten gleichzeitig in Untermoesien und Thrakien. Dass Ostrogotha mit seinem Heer von Decius vernichtet wurde, mussten Cassiodor und Iordanes in ihrem ideologischen Konstrukt verschweigen, vielmehr wurde ein Erfolg des Ostrogotha über Decius bei einem ersten Einfall 248 noch unter der Regierung der Philippi hinzuerfunden (Get. 90). Der erfolglose Zug des Ostrogotha gegen Marcianopolis wird nicht verschwiegen, aber als erkaufter Abzug nach langer Belagerung beschönigt (Get. 91-17, 94). Danach habe Ostrogotha einen Sieg über den Gepidenkönig Fastida errungen und anschließend hätten die Goten bis zu seinem Tod lange in Frieden gelebt. Die Auseinandersetzung der Terwingen mit den Gepiden datiert allerdings erst um 290 (Paneg. 9 (3) 17, 1). Dem Krieg des Kniva ist Get. 101–103 gewidmet (unrichtig zum Gotenkrieg 250 Piso 2019 mit veralteter Literatur).

Das Geschehen lässt sich wie folgt rekonstruieren, wobei auf die vorausgegangene Diskussion verwiesen wird. Der Abzug kampfstarker Legionsvexillationen aus Dakien und Obermoesien, wie üblich gefolgt insbesondere von berittenen Auxiliarkontingenten, im Spätsommer 249 für den Marsch auf Rom, wobei nach der Krise im untermoesischen Heer anlässlich der Usurpation auch die dortigen Legionen sicher mit einbezogen wurden, sahen die Karpen im Spätherbst/ Winter 249/250 die Gelegenheit für einen erneuten massiven Einfall in Untermoesien und Dakien gekommen. Der Limes Transalutanus wurde endgültig überrannt, ebenso die Olt-Linie. Mit Vorstößen in die Dacia Apulensis ist ebenfalls zu rechnen. Bald nach dem Antritt seines 2. Konsulats brach Decius mit seinem Feldheer, das nach dem Sieg bei Verona zweifellos mit nach Rom gezogen war und in Italien zur Belohnung überwintern konnte, unter Begleitung der Prätorianer (am 1.7.252 von Gallus für ihren Kriegseinsatz privilegiert AE 2004, 1918) zu seiner expeditio Carpica auf. Der aus Perusia stammende Consular C. Vibius Trebonianus Gallus (RKT[6], 200-201; PIR² V 579), sicher ein Vertrauter des Decius, erhielt das Kommando in Untermoesien (und Obermoesien?), während der Kaiser gegen die Karpen in den dakischen Provinzen zog, wo er ein Aufgebot von 3.000 Karpen vernichtete und den Siegesbeinamen Dacicus Maximus annahm; von der Colonia Nova Apulensis wurde er als restitutor Daciarum gefeiert (ILS 514 = IDR 3, 5, 431; zu korrigieren Piso 2019).

Zwischenzeitlich hatte der Gotenkönig Kniva das Föderatenverhältnis zu Rom gekündigt, da Philippus 248 die jährlichen Subsidienzahlungen eingestellt hatte (Get. 89). Außerdem hatte Philippus bei der Auflösung des kaiserlichen Feldheeres nach dem Karpenkrieg die gotischen Föderateneinheiten mit ihren Offizieren ohne ausreichendes Handgeld in die Heimat entlassen, wohl vor der 1000-Jahr-Feier, um ihnen kein Donativ auszahlen zu müssen. Im Sommer 249 flüchteten dann noch Angehörige des untermoesischen Heeres zu ihm, und er wusste vom ungenügenden Schutz der moesischen Donaulinie nach dem Abmarsch des Decius (Get.101). Allerdings waren die gotischen Siedlungsgebiete damals noch weit entfernt (so auch Get. 89), bis zum gewählten Donauübergang im Bereich der Flussinseln vor Oescus rund 750-800 km, wobei damals die Hauptmacht der Stammesverbände aus Infanterie bestand. Nach Get. 101 sammelte er ein Heer von 70.000 Mann, das er teilte und einen Verband unter der Führung des Ostrogotha und dessen Unterführern Guntherich und Argaith in den Ostteil Untermoesiens vorstoßen ließ (fiktiv das Riesenheer aller bekannten Völkerschaften des Raumes und ein alleiniger Zug nach Moesien für Ostrogotha bei Get. 91). Unter Berücksichtigung der Marschwege und bei einem Aufbruch im Frühling dürften die Goten die Donau im Hochsommer 250 erreicht haben; die römischen Truppen waren damals aber bereits wieder in der Region, wurden aber offenbar völlig überrascht. Knivas Kernverband bildeten, wie zu Recht anzunehmen ist, die römisch geschulten und disziplinierten ehemaligen Föderateneinheiten unter ihren ebenfalls römisch ausgebildeten Anführern; auch Kniva selbst dürfte einmal als gotischer Adeliger königlichen Ranges römischer Stabsoffizier gewesen sein. Nach seinem geglückten Donauübergang versuchte Kniva einen Handstreich auf

Novae, der von Trebonianus Gallus abgewehrt wurde (Get. 101–102). Anschließend versuchte er Nikopolis einzunehmen, wurde dort aber von Decius erfolgreich angegriffen (F 17; F 23, 3.10) und zum Rückzug in das Haemusgebirge gezwungen, wo er nun nach Philippopolis marschierte. Decius verfolgte ihn, wurde aber bei Beroia/Augusta Traiana bei einer Rast überraschend angegriffen und schwer geschlagen (Get. 102; Frg. IIa 29–IIb 1). Decius musste sich nach Oescus zurückziehen und sein Feldheer durch Truppenzuzüge neu aufbauen, nach Dexippos 80.000 Mann. Gallus stand mit seinem Provinzheer an der Donau (Get. 102), wo er die Operationen Ostrogothas blockierte. In Philippopolis stand T. Iulius Priscus mit einer gemeinsamen Statthalterschaft über Thrakien und Makedonien (F 23; Mecella 2012; verfehlt Sharankov 2018, 101–104, Identifizierung mit dem Bruder des Philippus). Kniva gelang im Herbst nach einer längeren, zuerst erfolglosen regulären Belagerung gemäß der von den gotischen Föderaten in den Parther- und Perserkriegen gelernten Praxis erst durch eine List und Verrat Philippopolis einzunehmen (Dexipp. F 24 ed. Martin; Frg Ia–Ib, p. 545–546; Get. 103). Priscus schloss ein Abkommen mit Kniva; nach Aur. Vict. Caes. 2–3 wurde er zum Kaiser ausgerufen, vom Senat zum Hostis erklärt und bald darauf getötet, was eher unhistorisch sein dürfte. Kniva überwinterte in Philippopolis und versorgte sich durch Streifzüge in Thrakien. Zum Schutz gegen ein Vordringen der Goten nach Griechenland wurde die Grenze zwischen Makedonien und Thessalien militärisch gesichert, während die Milizverbände der Böoter, Athener und Spartaner die Thermopylen besetzten (Frg. IIa 1–16).

Parallel zu den Operationen Knivas griff der Verband Ostrogothas Marianopolis an, scheiterte aber vor der Stadt nach langer verlustreicher Belagerung (F 22; Get. 92.94). Angesichts des Sieges Knivas über Decius bei Beroia und der Einnahme von Philippopolis, wo nicht nur reiche Beute, sondern auch gute Winterquartiere vorhanden waren, wurde der archon/dux Ostrogotha ob seiner Erfolglosigkeit im östlichen Untermoesien und wohl auch der schlechten Versorgungs- und Quartierlage im Winter 250/251 von seinen Kriegern, welche Preislieder auf Kniva sangen, beschimpft und der Feigheit und Glücklosigkeit bezichtigt (Frg. IIa, 17–29). Damit war seine Stellung, wie Wolfram betont (2020, 25–29), gefährdet. Um selbst eine Großtat zu vollbringen, beschloss er, Decius direkt anzugreifen. Dieser hatte sich im Winter in einem festen Lager nahe Beroia verschanzt, um bei guter Gelegenheit den Kampf gegen Kniva und zur Befreiung der thrakischen Gefangenen zu erneuern sowie Knivas Rückweg zur Donau zu blockieren, als Ostrogotha mit seiner ganzen Truppe gegen ihn anrückte (Frg. IIa, 29–30, IIb mit Teil der Ansprache des Decius an das Heer). Es ist zu ergänzen, dass Decius Ostrogotha eine vernichtende Niederlage beibrachte, wobei er sich der Taktik der verstellten Flucht bediente, und der Gotenführer mit 30.000 Kriegern den Tod fand (Zos. 1, 23). In der Folge erscheint nur mehr Kniva Gegner der Römer. Allerdings war in der Schlacht Decius' Sohn und Mitaugustus Volusianus tödlich verwundet worden; große Trauerfeierlichkeiten untersagte Decius (Aur. Vict. Caes 29, 5; Get. 103). Nach Aur. Vict. Caes. 29, 5 ist Herennius, als er zu kühn vordrang, in der Schlacht gefallen, bei Iord. Get. 103 ist der in der Schlacht durch einen Pfeilschuss verletzte Sohn des Decius einen grausamen Tod gestorben. Letzteres kann sehr wohl so verstanden werden, dass er erst nach längerem Siechtum seiner Verwundung erlegen ist. Herennius hatte seinen ersten Konsulat zusammen mit dem 3. Konsulat seines Vaters am 1.1.251 angetreten (RKT$^{6}$, 197–198), beiden in Abwesenheit. Die Tribunicia Potestas erhielt er am 10.12.250 als Consul designatus zusammen mit der trib. pot. III seines Vaters als cos. III des. (IAph 2007, 8.114; Eck 2016). Die Prägungen für Herennius als Augustus sind äußerst selten und bringen noch den Reverstyp Victoria Germanica (RIC 154), was sich auf den Sieg über Ostrogotha beziehen muss (für Decius RIC 43). Die Münzstätte Viminacium hat nur für Herennius Caesar emittiert (RPC IX, 29–33.41). Die Erhebung zum Augustus muss bald nach dem Jahresbeginn erfolgt sein, der Sieg über Ostrogotha noch im Frühjahr.

Nach der Vernichtung des Heeresverbandes Ostrogothas bot Kniva in Verhandlungen eine Rückgabe der Beute bei freiem Abzug an (Zonar. 12, 20, 589). Decius lehnte ab; er beabsichtigte, Kniva beim Rückmarsch zur Donau abzufangen; Gallus sollte mit dem untermoesischen Heeresverband den Rückweg an der Donau sperren.

Nach der Überwinterung in Philippopolis musste Kniva den Rückmarsch mit der großen Beute und den zahlreichen Gefangenen, verbunden mit einem entsprechenden großen Wagentross, organisieren. Auch sein Heer bestand zum großen Teil aus Infanterie. Die ‚Verreiterung'

insbesondere der östlichen Gotenverbände fand erst ab dem ausgehenden 3. Jh. im pontischen Steppenraum im Kontakt mit Sarmaten, Alanen und den reiternomadischen Vurugunden (Urugunden) statt. Für den Rückmarsch war Kniva angesichts des schwerfälligen Trosses an die ausgebauten römischen Straßen gebunden. Die direkten Wege nach Norden blockierte Decius. Es ist anzunehmen, dass Kniva zuerst auf der Reichsstraße nach Deultum Richtung Osten zog, dann über eine Querverbindung im östlichen Haemus die Hauptstraße Nicopolis – Marcianopolis bei Schumen erreichte und überraschend nach Nordwesten auf die wichtige Militärstraße über Abritus nach Sexaginta Prista abbog; damit vereitelte er eine Vereinigung von Decius und Gallus. Sein Verfolger Decius reagierte mit der Errichtung einer Sperrstellung rund 15 km nordwestlich von Abritus[14], wo er ein Lager oberhalb der Straßenstation Forum Thembronium (westlich des Dorfes Osenets an der Straße liegende römische Siedlung) errichtete. Von dem auf der Höhe Poleto liegenden römischen Lager aus war die ganze Region zu kontrollieren und die Kavallerie konnte das Fouragieren der Goten unterbinden. Kniva wiederum dürfte mit seinem Heer und dem Tross in der Talweite von Abritus an der römischen Straße gelagert haben, vermutlich unter Bildung einer Wagenburg wie bei Adrianopel 378 n. Chr. Nicht er, sondern Decius hatte diesmal die Wahl des Schlachtfeldes und konnte Kniva aus der besseren Position heraus zur Schlacht zwingen. Der anzunehmende Versorgungsengpass zwang Kniva, einen Angriff auf die taktisch überlegene römische Position zu führen. Es war auf beiden Seiten eine rangierte Feldschlacht mit lehrbuchmäßiger Taktik, wobei sich geschulte und erfahrene Kommandeure gegenüberstanden, sich Kniva aber wie bei Beroia als überlegener Taktiker erwies. Nach der über Zosimos (trotz der falschen Positionierung der Goten hinter dem Morast und dem vermeintlichen Verrat des Trebonianus Gallus) fassbaren Beschreibung des Dexippos und den Ausführungen des Strategikons teilte Kniva sein Heer in drei Treffen; sein Ziel musste es sein, die Römer aus ihrer überlegenen Position herunterzuziehen. Das erste Treffen versuchte entlang der Straße durchzubrechen, erlitt schwere Verluste und flutete zurück. Das zweite Treffen, wohl die römisch ausgebildeten Kerntruppen und römische Überläufer, griff frontal an und zog sich scheinbar fluchtartig zurück; Decius ließ aber nicht hügelabwärts verfolgen. Das dritte Treffen verbarg Kniva teils auf beiden Seiten der morastigen Beli Lom-Niederung, teils ließ er es in das Tal hineinmarschieren und so einen Umgehungsangriff hinter die linke römische Flanke und gegen das römische Lager vortäuschen. Dies waren sehr wahrscheinlich Leichtbewaffnete, Bogenschützen und Speerwerfer, die eine verstellte Flucht durch das verschlammte Gelände ohne größere Probleme bewerkstelligen konnten. Westlich des Dorfes Osenets mündet der Dermendere in den Beli Lom, der in der Antike durch die nach Norden führende Talniederung mäandrierte und ein Feuchtgebiet bildete; es ist noch immer durch Überschwemmungen gekennzeichnet (Hauptniederschlag in der zweiten Maihälfte), die das Land zeitweise zu einem Morast werden lassen. Decius muss diesen Verband für die noch intakte Reserve Knivas gehalten haben und griff unter seiner persönlichen Führung von der Höhe herab mit seiner Reiterei einschließlich der Gardereiterei an, sicher in der Erwartung, nach der Zerschlagung dieser Truppe Kniva im Rücken angreifen zu können und so einen vollständigen Sieg zu erringen. Gleichzeitig ließ er, wie mit gutem Grund anzunehmen ist, die Infanterie zum Angriff auf Knivas zweites Treffen vorrücken. Die Leichtbewaffneten flüchteten, wie von Kniva vorgesehen, vor der heransprengenden Kavallerie durch den Morast talaufwärts, während die stürmisch in der Verfolgung vordrängende römische Reiterei mit dem Kaiser im Morast stecken blieb. Die beiderseits verborgenen gotischen Einheiten und die aus der verstellten Flucht Kehrtmachenden schlossen die im Morast kaum kampffähigen römischen Elitetruppen ein und beschossen sie von allen Seiten mit Pfeilen und Wurfgeschoßen. Im Chaos stürzte der Kaiser vom Pferd und verschwand in Getümmel und Haufen toter und verwundeter

[14] Durch archäologische und numismatische Funde, insbesondere Militaria, ist das Schlachtfeld lokalisiert (Radoslavova, Dzanev, Nikolov 2011, die Forum Thembronium in der römischen Siedlung südöstlich des Dorfes Dryanovets annehmen; Autopsie des Verf.) Streufunde von Gold- und Silbermünzen des Decius, der Herennia Etruscilla und des Herennius Etruscus; 1952 ein Münzhort mit etwa 30 Aurei und über 540 Denaren und Antoninianen einschließlich Decius, Herennia Augusta und Herennius Caesar. Helmteile belegen die Legionen IV Flavia, VII Claudia und XIV Gemina bzw. deren Vexillationen. Für Hinweise danke ich L. Vagalinski und N. Sharankov, ebenso für die Auskünfte über das örtliche Klima.

Männer und Pferde. Dieses Desaster muss zur Auflösung der römischen Schlachtreihe geführt haben, die von Kivas zweitem Treffen bedrängt und wohl von der gotischen Kavallerie im Rücken gefasst wurde; das römische Lager wurde erstürmt. Vermutlich hat die Plünderung des Lagers und des Schlachtfeldes, wie verstreute Gold- und Silbermünzen sowie wertvolle Rüstungsteile bezeugen, eine völlige Vernichtung der flüchtenden römischen Streitkräfte verhindert.

Trebonianus Gallus ließ sich nach dem Eintreffen der Meldung vom Tod des Kaisers von seinen Soldaten zum Augustus ausrufen; Hostilianus[15], der jüngere in Rom verbliebenen Sohn des Decius, den dieser wohl nach der schweren Verwundung des Herennius zum Augustus erhoben hatte, wurde als Mitaugustus anerkannt und eine Samtherrschaft proklamiert, ebenso die Divinisierung der Decii (s. o.); auch für Herennia Etruscilla Augusta wurden weiterhin Münzen geprägt (Strobel 1993, 231). An einem weiteren Kampf gegen Kniva war Gallus gegenüber der Festigung seiner Machtübernahme nicht interessiert. Kniva nahm mit ihm Verhandlungen auf, und ein Abkommen über den freien Abzug mit Beute und Gefangenen über die Donau und die Wiederaufnahme der jährlichen Subsidienzahlungen gegen einen Verzicht auf weitere Plünderungszüge wurde geschlossen (Zos. 24, 2; Zonar. 12, 21, 1; Get. 106). Erst nach dem Tod Hostilians in Rom wurde Gallus‘ Sohn Volusianus zum Caesar, dann zum Mitaugustus erhoben (nur Gallus und Hostilian in I.Bölcske 8, 11.6.251; noch als Caesar AE 1979, 302; 2016, 1739). Bei seiner Abreise nach Rom setzte Gallus den Consular M. Aemilius Aemilianus als multi-provinzialen Statthalter (Vervaet 2007, 126) gleichzeitig der moesischen und dakischen Provinzen ein, wohl primär mit der Aufgabe der Reorganisation des Heeres und der Logistik.[16] In der Dacia Apulensis ist der ritterliche Finanzprokurator M. Aurelius Marcus agens vice praesidis als regionaler Stellvertreter belegt (AE 1983, 815.841; Piso 2014). Nur Zos. 1, 28, 1 bezeichnet ihn als Kommandeur der pannonischen Legionen, was eher auf deren Anschluss an seine Usurpation zu beziehen ist; P. Cosinius Felix ist 252 als Legat in Unterpannonien belegt (AE 1953, 12). Mit der Eroberung Armeniens durch Shapurs Sohn Hormizd-Ardashir begann 252 der Perserkrieg erneut (Strobel 1993, 220–223); die Situation an der Donau war stabilisiert, so dass 252 Vexillationen der IV Flavia (Singidunum), XIII Gemina (Apulum) und XIV Gemina (Carnuntum) sowie Elitetruppen des ober- und unterpannonischen Auxiliarheeres, insbesondere Kavallerie, nach Syrien verlegt werden konnten (Ala I Flavia Augusta Britannica milliaria c. R., Ala I Ulpia contariorum milliaria c. R., Ala I c. R.). Eine erste Feldzugskampagne 252 war ein römischer Erfolg, Shapurs Belagerung von Nisibis scheiterte. Die für 253 vorbereitete Offensive unter Volusian wurde durch die Usurpation des Aemilianus vereitelt. Dieser verweigerte 252 die Auszahlung der Jahresgelder in der Kniva zugesagten Höhe, was zu einem erneuten gotischen Heereszug wahrscheinlich im Winter 253 nach Untermoesien führte, wo Aemilianus ihn unvermutet angriff und im Frühling einen vernichtenden Sieg errang, um anschließend die Donau überraschend zu überschreiten und einen Vernichtungsfeldzug in die karpischen Siedlungsgebiete zu führen (entsprechend Zos. 1, 28, 1–2; Zonar. 12, 21, 2–3; Strobel 1993, 240–243). Die Karpen fielen in der Folge als Gegner bis 273 aus. Nach einem weiteren Sieg wurde er von seinem Heer wohl im Mai 253 noch im Feindesland zum Kaiser ausgerufen (Ioh. Ant. 229, 7–8). Es folgte der Anschluss Pannoniens und weitere Anerkennung, so auch in Dalmatien (REM Cacak 6). Der Kommandeur der V Macedonica stieß offenkundig mit dem Großteil der Legion zu Aemilianus‘ Heer für den Zug nach Italien; stellvertretend fungierte der Präfekt der Ala I Batavorum milliaria als Kommandeur für die in Potaissa verbliebenen Teile (agens vice praefecti legionis; ILD 2, 947.948; anders Piso 2014). Für

[15] RKT[6], 198-202. Die Münzserien des Jahres 251 zeigen die Erhebung Hostilians noch zu Lebzeiten seines Vaters zum Augustus. Die Prägung für Hostilianus Augustus in Viminacium (RPC IX 1, 51–52, unter Gallus eingeordnet) kann bereits vor dem Tod des Decius begonnen haben.

[16] Als Statthalter in Moesien Eutr. 9, 5–6; Epit. de Caes. 31, 1; /0n. 12, 21; Iord. Rom. 285; Ioh. Ant. 229 (ed. Roberto). Iord. Get. 105 lokalisiert die Usurpation ebenfalls in Moesien; sein Gotensieg wird mit verklausulierten Wendungen vertuscht, die Ereignisse 253 in Get. 106 falsch dargestellt (Gallienus folgt auf den natürlichen Tod von Gallus und Volusian), und zwar in völligem Gegensatz zur gleichzeitig verfassten Romana (§ 285–287). Unrichtig die Tradition bei Zos. 1, 26–27 und Zonar. 12, 21 (stellt die Invasionen ab 258 noch summarisch unter Gallus); unrichtig deshalb Huttner, 2008, 215. Nicht immer überzeugend Piso 2014.

seinen Marsch auf Rom hatte Aemilianus die moesischen, unterpannonischen und dakischen Provinzheere hinsichtlich ihrer schlagkräftigen Kontingente weitgehend ausgedünnt. Ende Juli/Anfang August wurden Gallus und Volusian bei Interamna oder Forum Flaminii noch vor dem Zusammentreffen mit Aemilianus, der wahrscheinlich erst in Oberitalien eingerückt war, von den eigenen Soldaten ermordet, der Usurpator vom Senat anerkannt (Anerkennung in Ägypten noch vor dem 29.8.253), seine Gattin zur Augusta erhoben, seine Familie zur Domus divina erklärt (Strobel 1993, 239–243; Pfund 2021, 283–288; RKT[6], 203–204; REM Cacak 6). 3–4 Monate nach seiner Ausrufung zum Kaiser wurde Aemilianus Anfang September beim Heranrücken des Heeres Valerians, den seine Soldaten nach dem Todes des Gallus und Volusianus zum Kaiser ausgerufen hatten, bei Spoletum ebenfalls von den eigenen Soldaten getötet. Rom hatte Aemilianus nicht mehr erreichen können, Valerian zog dort etwa Mitte September ein (Strobel 1993, 241–244; Goltz, Hartmann 2008, 223–234, 238–240). Im Osten benützte Schapur I. das Bürgerkriegschaos 253 dazu, unter Umgehung der festen römischen Positionen über den Euphrat vorzustoßen, das römische Heer bei Barbalissos (Qala'at Balis) vernichtend zu schlagen und die syrischen Provinzen zu überrennen sowie Antiochia einzunehmen (Strobel 1993, 228–229, 243). Die transferierten Kontingente der Donauheere sind 253 im Osten untergegangen, ebenso etwa die Vexillation der Legio II Parthica und die begleitende Cohors XIV Urbana. An der Unteren Donau waren im Herbst/Winter 253/254 „Skythen", wohl eine nordpontische Allianz unter gotischer Führung, unter Ausnutzung der inneren Krise Roms und der militärischen Ausdünnung der Region offensichtlich unter Umgehung der befestigten Städte und Verwüstung Thrakiens bis Thessalonike vorgestoßen, dessen Belagerung scheiterte (Zos. 1, 29, 2–3; Zon. 12, 23, 1; Sync. 466, 1–4); sie mussten sich vor Valerian, der mit seinem Begleitheer über den Balkan nach Kleinasien zur Perserfront marschierte, mit ihrer Beute zurückziehen. Ob Valerian Truppen gegen sie in Marsch setzte, ist nicht überliefert. Der Einfall löste Panik aus; zum Schutz Griechenlands wurden die Thermopylen besetzt und auf dem Isthmus von Korinth eine Sperrmauer errichtet worden; in Athen veranlasste der Kaiser den Neubau der Stadtmauer. 254-256 konnte Gallienus den mittleren und unteren Donauraum vorerst wieder stabilisieren, um sich anschließend ab Herbst 256 auf die Rheinfront zu konzentrieren, während Valerian 255–256 trotz des Verlustes von Dura-Europos einen wichtigen Abwehrerfolg gegen Shapur I. in Nordmesopotamien errungen hatte (Strobel 1993, 228–229).

### IV. Der Reka Devnia-Hort in seinem historischen Kontext

Mit gutem Grund ist in dem Depothort ein öffentlicher Kassenbestand zu sehen, der mit der Finanzprokuratur für Untermoesien, Sitz in Marcianopolis, zu verbinden ist. Ein Datum für das Ende der Kollektionierung ist auf Grund des Fehlens eines wesentlichen Teils des Münzbestandes ebenso nicht möglich wie ein Zeitpunkt für die Verbergung des Depots. Für den Münzbestand wurden offenkundig systematisch ältere Denare aus den Steuereinkünften des Fiscus aussortiert. In welchem Umfange Antoniniane ab Gordian III. mit geringer Abnutzung und damit gutem Silberglanz hinzukamen, bleibt offen. Eine Deutung des Hortes als reservierter Geldbestand für die Auszahlung der Jahresgelder an die Goten, die Aemilianus 252 nur in geringem Umfange auszahlte und die danach unterblieben, stellt eine Möglichkeit dar, die natürlich hypothetisch bleiben muss. Die Verbergung des Kassendepots kann mit der Usurpation des Aemilianus, der folgenden Invasion 253/254 oder aber erst jener verheerenden von 258 (Zos. 1, 34, 1–2; Goltz, Hartmann 2008, 247–248), verbunden gewesen sein, als ein großer Heeresverband mit begleitender Flotte die westpontische Küste entlangzog.

### Literatur

Alram, M., Gyselen, R., 2003. SNSassanidarum I. Wien.

Banchich, T. M., 2009. Introduction, in: Banchich, T. M., Lane, E. N., The History of Zonaras from Alexander Severus to the Death of Theodosius the Great. London, New York.

Banchich, T. M., 2015. The Lost History of Peter the Patrician. London, New York.

Bertol-Stipetić, A., Nađ, M., 2016. Kamenica. A Hoard of Roman Silver Coins from the

Archaeological Museum in Zagreb. Zagreb.

Berzovan, A., 2022. At the Borders of the Great Steppe. Late Iron Age Hillforts between the Eastern Carpathians and Prut (5th–3rd centuries AD). Cluj-Napoca.

Biernacki, A. B., Sharankov, N., 2018. A Hitherto Unknown Aspect of the Military Activity of the Legio I Italica in the Light of a Recently Discovered Pedestal with a Greek Inscription from Novae. ArchBulg 22/3, 1–19.

Bland, R., 2018. Coin Hoards and Hoarding in Roman Britain, AD 43 – c. 498. London.

Bleckmann, B., 1991. Die Reichskrise des III. Jahrhunderts in der spätantiken und byzantinischen Geschichtsschreibung. Untersuchungen zu den nachdionischen Quellen der Chronik des Johannes Zonaras. München.

Bleckmann, B., Groß, J., 2016. Historiker der Reichskrise des 3. Jahrhunderts I. Paderborn.

Borić-Brešković, B., Vojvoda, M., 2018. Circulation of Provincial Coins of the Viminacium Colony, in: Vivere militare est. From Populus to Emperors – Living in the Frontier II, Belgrad, 73–100.

Borić-Brešković, Vojvoda, M., 2021. Roman Coin Hoards Deposited during the Reign of Philp I from the Territory of Present-Day Serbia, in: Varbanov, V. Rusev, N. (ed.), Coin Hoards in South-Eastern Europe (1st–6th century AD), Rousse, 95–105.

Boteva, D., 2001. On the Chronology of the Gothic Invasions under Philippus and Decius (AD 248–251). Archaeologia Bulgarica 572, 37–44.

Boteva, D., 2020. Some Considerations Related to the Skythica Vindobonensia, in: Mitthof, Fr., Martin, G., Gruskova, J. (Hrsg.), Empire in Crisis: Gothic Invasions and Roman Historiography. Beiträge einer internationalen Tagung zu den Wiener Dexipp-Fragmenten (Dexippus Vindobonensis), Wien, 3.–6. Mai 2017. (TYCHE Supplementband 12),195–212.

Brandt, H., 2020, Ein numismatischer Mythos. Ein Ostfeldzug Gordians III. 239/240 n. Chr. ZPE 213, 301–304.

Brandt, H., 2021, Die Kaiserzeit. Römische Geschichte von Octavian bis Diocletian 31 v. Chr. – 284 n. Chr. HdA III.11. München.

Brecht, A., 1999, Die römische Reichskrise von ihrem Ausbruch bis zu ihrem Höhepunkt in der Darstellung byzantinischer Autoren. Rahden/Westf.

Bureth, P., 1986. Les Titulatures impériales dans les papyrus, les ostraca et les inscriptions d'Égypte. Brüssel.

Burgess, R. W., 2014. Roman Imperial Chronology and Early-Fourth-Century Historiography. The Regnal Durations of the So-called Chronica Urbis Romae of the Chronograph of 354. Stuttgart.

Carolla, P., 2016. John Malalas in the Excerpta Constantiniana de Insidiis (EI): A Philological and Literary Perspektive, in: Meier, M., Radtki, S., Schulz, F. (ed.), Die Weltchronik des Johannes Malalas. Autor – Werk – Überlieferung, Stuttgart, 239–252.

Cavagna, A., 2012. Provincia Dacia: i coni. Milano.

Depeyrot, G., 2004. La propagande monétaire (64–235) et le trésor de Marcianopolis (251). Wetteren.

Dimitrov, K., 2005. Novae and the Barbaric Incursions in 238–251. Orpheus 15, 79–98.

Drost, V., 2011/2012. Le trésor d'antoniniens de Saint-Jean-d'Ardières (Rhone) (terminus 252 après J.-C.). Trésors monétaires 25, 1–45.

Eck, W., 2016. Zur tribunicia potestas von Kaiser Decius und seinen Söhnen. Chiron 46, 489–503.

Estiot, S. et al., 2013. Le double trésor de Magny-Cours, Nièvre (terminus 303 de notre ère). Trésors monétaires 25, 47–175.

Estiot, S., 1997. Le trésor de Saint-Maurice-de-Gourdans, Pollet (Ain), 1.272 antoniniens stratigraphiés. Trésors monétaires 16, 69–127.

Estiot, S., 2009–2010. Le trésor d'or romain de Lava, Corse (terminus 272/273 de notre ère). Trésors monétaires 24, 91–152.

Fitz, J., 1978. Der Geldumlauf der römischen Provinzen im Donaugebiet Mitte des 3. Jahrhunderts II. Budapest, Bonn.

Fitz, J., 1994. Die Tätigkeit des Münzamtes von Viminacium. Alba Regia 25, 287–301.

Găzdac, C., 2012. War and Peace! Patterns of Violence through Coin Hoards distribution – The Middle and Lower Danube from Trajan to Aurelian. Istros 18, 165–198.

Găzdac, C., Alföldy-Găzdac, A., 2005. The Coinage 'PROVINCIA DACIA' – A Coinage for one Province only?. AMN 39/40, 247–258.

Găzdac, C., Alföldy-Găzdac, A., 2008. The Management of a Monetary Crisis? The 'P M S COL VIM' and 'PROVINCIA DACIA' Coinages in the Roman Monetary Policy of the 3rd Century AD. NZ 116/117, 135–171.

Găzdac, C., Alföldy-Găzdac, A., 2015. When the Province Take Care of its Own Coin Supply. The Case of the Town of Drobeta in Roman Dacia. JAHA 2.4, 26–28.

Gerov, B., 1977. Die Einfälle der Nordvölker in den Ostbalkanraum im Lichte der Münzschatzfunde I. Das II. und III. Jahrhundert (101-284). ANRW II 6, 110–181.

Gilles, K.-J., 2013. Der römische Goldmünzenschatz aus der Feldstraße in Trier. Trier.

Haensch, R., Weiß, P., 2014. Weitere Statthaltergewichte von Nikomedeia. Neue Ergebnisse zur Stadt- und Reichsgeschichte, Chiron 44, 533–539.

Hellings, B. D. R., Spoerri Butcher, M., 2017. Quantifying Relative Coin Production during the Reign of Nerva and Trajan (AD 96–117): Reka Devnia Reconsidered in Light of Regional Coin Finds from Romania and the North-West. RN 163, 53–86.

Hristova, N., Jekov, G., 2015. The Coins of Moesia Inferior 1st to 3rd c. AD Marcianopolis. Blagoevgrad.

Huttner, U., 2008. Von Maximinus Thrax bis Aemilianus, in: Johne, K. P. (ed.), Die Zeit der Soldatenkaiser, Berlin, 161–221.

Huyse, P., 1999. Die dreisprachige Inschrift Šābuhrs I. an der Ka'ba-i Zardušt (ŠKZ), 2 Bde. London.

Kolendo, J., 2008. Novae during the Gothic Raid of 250/1 (Iordanes, Getica, 101-103), in: Derda, T., Dyczek, P., Kolendo, J. (ed.), Novae. Legionary Fortress and Late Antique Town, Warschau, 117–131.

Körner, C., 2002. Philippus Arabs. Berlin, New York.

Kovács, P., 2015. Einige Bemerkungen zum Todesdatum von Decius (AÉp 2003, 1415), AAH 66, 305–314.

Lazarenko, I., 2014. Denya's Great 1929 Coin Hoard (Bulg.), Izvestija na regionale istoriceski muzej Razgrad 1, 265–331.

MacKenzie, D. N., 1993. The Fire Altar of Happy Frayosh. BAI 7, 105–109.

Martin, G., Grusková, J., 2020. Scythica Vindobonensia alias Dexippus Vindobonensis. Vorläufige Transkription, in: Mitthof, F., Martin, G., Grusková, J. (ed.), Empire in Crisis: Gothic Invasions and Roman Historiography, Wien, 543–581.

Mecella, L., 2012. T. Iulius Priscus e l'assedio di Filippopoli (250/251 d.C.), in:Pignora amicitiae. Scritti di storia antica e storiografia off. a Mario Mazza, Catanian 289–312.

Mecella, L., 2013. Dexippo di Atene. Testimonianze e frammenti. Tivoli.

Mecella, L., 2017. Malalas und die Quellen für die Zeit der Soldatenkaiser, in: Carrara, L., Meier, M., Radtki-Jansen, C. (ed.), Die Weltchronik des Johannes Malalas. Quellenfragen, Stuttgart, 73–98.

Meguelati, M., 2014/2015. Un trésor de bronzes romaines de Haut-Empire provenant du village du Bray (Eure). Trésors monétaires 26, 11–95.

Metcalf, W. E., 2002. The Reka Devnia Hoard Re-Examined, in: Gorini, G. (ed.), Ritrovamenti monetali nel mondo antico. Problemi e metodi, Padova, 145–150.

Miškec, A., 2018. The Monetary Circulation of Roman Provincial Coins from the Viminacium

Mint in the Present-Day Slovenina, in: Ivanišević, V. et al., Circulation of Antique Coins in Southeastern Europe, Belgrad, 87–114.

Mitthof, F., 2020. Bemerkungen zu Kaiser Decius und seinen Gotenkrieg 250-251 n. Chr., in: Mitthof, F., Martin, G., Grusková, J. (ed.), Empire in Crisis: Gothic Invasions and Roman Historiography, Wien, 311–336.

Moorhead, S., 2019. The Frome Hoard. How a Massive Find Changes Everything, in: Callagher, B. (ed.), Too Big to Study? Troppo grandi da studiare?, Triest, 281–304.

Mouchmoff, N. A., 1929. Un trovamento de monete romane a Reka Devnia in Bulgarie (Marcianopolis). Rassegna Numismatica 26, 441–444.

Mouchmov, N. A., 1930. Une trouvaille de monnaies antiques près du village de Reka-Devnia (Marcianopolis). Aréthua 27, 49–52.

Mouchmov, N. A., 1934. Le trésor numismatique de Réka-Devnia (Marcianopolis). Sofia.

Niculiţă, I., Zanoci, A., 2004. Sistemul defensiv la traco-geţii din regiunea Nistrului Mijlociu, in: Niculiţă, I., Teodor, S., Zanoci A. (ed.),Thracians and Circumpontic World II, Chišinău, 104–129.

Paschoud, F. 2020. Ein Beispiel des Gebrauches und des Misssbrauches von Dexipp in der HA: Max. Balb. 16, in: Mitthof, F., Martin, G., Grusková, J. (ed.), Empire in Crisis: Gothic Invasions and Roman Historiography, Wien, 165–170.

Peachin, M., 1990. Roman Imperial Titulature and Chronology, A. D. 235–284. Amsterdam.

Petrović, V. P., 2018. The Aquae Station on the Roman Danube Limes Road in Upper Moesia. Open Archaeology 2018/4, 386.393.

Pfund, G., 2021. Von Pincus bis Licinius. Historischer Kommentar zu den Chronica urbis Romae im Chronographen von 354. Stuttgart.

Pilon, F., 2014/2015. Les Trésors de sesterces de Famars et de Lahoussoye, Somme (terminus décennies 250). Trésors monétaires 26, 121–185

Piso, I., 2005. Der Krieg des Philippus gegen die Karpen, in: Ders., An der Nordgrenze des Römischen Reiches. Ausgewählte Schriften (1972-2003), Stuttgart, 51–59.

Piso, I., 2014. Zur Reform des Gallienus anläßlich zweier neuer Inschriften aus den Lagerthermen von Potaissa. Tyche 29, 125–146.

Piso, I., 2019. Traianus Decius und die Provinz Dakien, in: Nollé, M. et al. (ed.), Panagyrikoi Logoi. Festschrift Johannes Nollé, Bonn, 53–61.

Rathbone, D., 1986. The Dates of Recognition in Egypt of Emperors from Caracalla to Diocletianus. ZPE 62, 101–131.

RKT$^{6}$ = D. Kienast, W. Eck, M. Heil, Römische Kaisertabelle, Darmstadt $^{6}$2017.

Roberto, U., 2005. Ioannis Antiocheni Fragmenta ex Historia chronica. Berlin, New York.

Roberto, U., 2016. John Malalas as a Source for John of Antioch's Historia Chroniké. The Evidence of the Excerpta historica Constantiniana, in: Meier, M., Radtki, S., Schulz, F. (ed.), Die Weltchronik des Johannes Malalas. Autor – Werk – Überlieferung, Stuttgart, 267–286.

Rougé, J., De Decker, D., 2013. De mortibus persecutorum : un libelle au service de la propagande constantinienne. Iaşi.

Sancinito, J., 2017. The Antioche Coinage of Trajan Decius (249-251 CE). AJN 29, 125–148.

Sharankov N., 2018. Notes on Governors of Roman Thrace, in: Vagalinski, L. (ed.), Proceedings of the First International Conference on Roman and Late Antique Thrace, Sovia, 98–109.

Sharankov, N. 2020. Decius as Governor of Lower Moesia and Severus Alexander's Visit to the Province AD 234. ZPE 214, 309–319.

Spoerri Butcher, M., 2019. Reka Devnia (Bulgaria): The Challenges of Creating a Digital Dataset of 80,000 Coins, in: Callagher, B. (ed.), Too Big to Study? Troppo grandi da studiare?, Triest, 161–171.

Stella, A., 2018. Viminacium Coins from Aquileia and Venetia et Histria, in: Ivanišević, V. et al.,

Circulation of Antique Coins in Southeastern Europe, Belgrad, 115–129.

Strobel, K., 1993. Das Imperium Romanum im ‚3. Jahrhundert'. Stuttgart.

Strobel, K., 2019a. Südosteuropa in der Zeit von Republik und Principat, in: Mitthof, F., Schreiner, P., Schmitt, O. J. (ed.), Handbuch der Geschichte Südosteuropas I. Herrschaft und Politik in Südosteuropa von der römischen Antike bis 1300. Teilband 1, Berlin, Boston, 131–322.

Strobel, K., 2019b. Kaiser Traian. ²Regensburg.

Strobel, K., 2021. Die sogenannte Reichskrise des 3. Jahrhunderts n. Chr. im Spiegel historischer, regionaler und lokaler Diversität: Grundlagen einer historisch-archäologischen Quellenkritik, in: Auer, M., Hinker, C. (ed.), Roman Settlements and the "Crisis" of the 3rd Century AD, Wiesbaden, 181–213.

Szaivert, W., 1985. Einige Bemerkungen zum Fund von Reka-Devnia, in: Tačeva, M. (ed.), Studia in honorem Christo M. Danov, Sofia, 408–411.

Tartaglia, L., 2014. Gregorii Cedreni Historiarum compendium. Rom.

Treadgold, W., 2007. The Early Byzantine Historians. New York et al.

Treadgold, W., 2013. The Middle Byzantine Historians. New York et al.

Trommenschlager, L., Groch, P.-Y., 2014/2015. Le trésor de sesterces de Saint-Sauveur (Somme). Trésors Monétaires 26, 1–9.

Van Hoof, L., Van Nuffelen, P., 2017. The Historiography of Crisis: Jordanes, Cassiodorus and Justinian in the mid-sixth-century Constantinople. JRS 107, 275–300.

Van Hoof, L., Van Nuffelen, P., 2020. The Fragmentary Latin Histories of Late Antiquity (AD 300–620). Cambridge.

Van Nuffelen, P., Van Hoof, L., 2020. Jordanes Romana and Getica. Liverpool.

Varbanov, V., 2012. Barbarian Invasions in the Roman Provinces of Lower Moesia and Thrace in the Mid-3rd C. AD and the Coin Hoards from that Period, in: Vagalinsky, L., Sharankov, N., Torbatov, S. (ed.), The Lower Danube Roman Limes (1st – 6th C. AD), Sofia, 289–309.

Varbanov, V., 2021. Roman Coin Hoards from Moesia Inferior and Thrace (From Hadrian to Diocletian). Current Stage of Research, in: Varbanov, V. Rusev, N. (ed.), Coin Hoards in South-Eastern Europe (1st–6th Century AD), Rousse, 59–94.

Vervaet, F. J., 2007. The Reappearance of the Supra-Provincial Commands in the Late Second and Early Third Centuries C.E.: Constitutional and Historical Considerations. In: O. Hekster u. a. (ed.), Crisis and the Roman Empire, Leiden, Boston, 125–139.

Vojvoda, M., Redžić, S., 2020. Roman Coin Hoards of the Third Century AD Found in the Territory of Present-Day Serbia (Moesia Inferior, Dalmatia, Pannonia Inferior): The Reasons for Their Burial, in: Găzdac, C. (ed.), Group and Individual Tragedies in Roman Europe. The Evidence of Hoards, Epigraphic and Literary Sources, Cluj-Napoca, 531–554.

Von Kaenel, et al., 1993. Der Münzhort aus dem Gutshof in Neftenbach. Zürich, Egg.

Weber, E., 2021. Wolfgang Lazius und die römischen Inschriften von Wien, in: S. Donecker et al. (ed.), Wolfgang Lazius (1514-1565). Geschichtsschreibung, Kartographie und Altertumswissenschaft im Wien des 16. Jahrhunderts, Wien, 385–412.

Wiesehöfer, J., 2008. Das Reich der Sāsāniden, in: Johne, K. P. (ed.), Die Zeit der Soldatenkaiser, Berlin, 531–569.

Winter, E., Dignas, B., 2001. Rom und das Perserreich. Berlin.

Witschel, C., 2020. Germanische Einfälle in die Provinzen an Rhein und oberer Donau im 3. Jh. n. Chr.: Die Problematik der epigraphischen, numismatischen und archäologischen Zeugnisse, in: Mitthof, F., Martin, G., Grusková, J. (ed.), Empire in Crisis: Gothic Invasions and Roman Historiography, Wien, 423–530.

Wolfram, H. 2020. Ostrogotha – ansischer Amaler oder glückloser Feigling, in: Mitthof, F., Martin, G., Grusková, J. (ed.), Empire in Crisis: Gothic Invasions and Roman Historiography, Wien, 17–34.

Ziegler, R., 2001/2002. Plante Kaiser Pupienus einen Feldzug gegen die Sasaniden? Bemerkungen zur Münzprägung von Tarsus in Kilikien und zur vita Maximi et Balbini 13,5 in der Historia Augusta. JNG 51/52, 37–47.

# Considerations regarding the Presence of 'Geto-Dacian' Coins in the Istro-Pontic Territory. Discoveries, Contexts, Roles (3rd – 1st Centuries BC)

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**Abstract:** The accumulation of information regarding the significant addition of monetary finds specific to the Geto-Dacian (and partially Celtic) mint in the territory between the Danube and the Black Sea, located in the extreme northeastern area of Thrace, gives rise to a reassessment of the finds, their contexts, and the role they played within local communities specific to the 3rd–1st centuries BC. Although the number of discoveries is not comparable to that known north of the Danube, they are a well-individualised presence within the open and fortified settlements of the territory in question, both in isolation and in hoards. Especially those present (in general) along the right bank of the Danube and, in particular, in the southwestern area of the Istro-Pontic territory. Most of them appear in fortuitous contexts, one reason being the rarity of archaeological research carried out in settlements specific to the local population. An important part of them was hoarded by the local noble elite in the 3rd–1st centuries BC, few were used in trade, and others were kept in the possession of some people until the early Roman period as reserves of noble metal.

**Keywords:** Geto-Dacian coins, Dobrudja, 3rd–1st centuries BC.

BulgNJ

The geographic area considered in our study belongs to the Istro-Pontic region (Dobrudja), a territory that, until the 1st century AD, represented the northeastern extremity of the Thracian space. Chronologically, the period of our focus covers approximately 250–300 years of the tumultuous evolution of the Dobrudjan region, which represents a relatively narrow temporal unit within the predefined boundaries. The lower limit corresponds to the moment when we witness the spread of coins from the second stage of development of the North-Pontic Geto-Dacian coinage, while the upper limit coincides with the increasing influence of the Romans, beginning in the late 1st century BC and the early 1st century AD.

In general, the Geto-Dacian coins found in Dobrudja belong to the category of local imitations specific to the second final stage of coinage development in the northern Danube region, typical of the period between the 2nd and 1st centuries BC. They include types such as Dumbrăveni, Adâncata-Mânăstirea, Vârteju-Bucureşti, Inoteşti-Răcoasa, Mediești-Aurit, Rădulești-Hunedoara, Toc-Cherelus, as well as the so-called Alexander III-Philip III Arrhidaeus type. In our analysis, we also include the Niculițel/Parcheș or Măcin type, the only one from this stage of Dobrudjan origin. These used, in particular, as a prototype the tetradrachm of Philip II, and, in general, other Macedonian-type pieces, which knew a good presence among the local tribes, located north and

south of the Danube (Mihăilescu-Bîrliba 1997, 72; Preda 1998, 220).

The second phase of Geto-Dacian coinage is characterised by a significant reduction in the number of coin types (including weights and silver content), along with the expansion of the discovery area. Among the coins from the second phase of Geto-Dacian coinage, we also find a few examples belonging to the Agriș, Huși-Vovrieşti, and Ocnița-Cărbunești coin types (**Fig. 1**) from the first stage, which were discovered in the northwestern and southwestern extremities of the Istro-Pontic territory. Their presence should be linked to the circulation of people and goods along the Danube and throughout the Lower Danube region, often used as valuable commodities due to their silver content. The moment of their accidental introduction should belong to the beginning of the second phase, coinciding with the penetration of certain categories of Geto-Dacian coins specific to this period, generally moving from the north to the south of the Danube.

**Fig. 1.** Isolated monetary discoveries of the Agriș, Huși-Vovrieşti, and Ocnița-Cărbunești types in the Istro-Pontic territory.

Focusing only on the principles of economic aspects, it was considered normal a few decades ago that there was a lack of issuance or non-circulation of Geto-Dacian coins in Dobrudja. This fact was explained, on one hand, by the presence of Greek coins from the autonomous period and the maintenance of a flourishing trade with the Pontic colonies (Preda 1980, 339; Preda 1998, 175). On the other hand, Macedonian coins or coins of Macedonian type were used to cover the needs for precious metals (Preda 1975, 65). Thus, the firm stance that expressed the idea that 'the monetary process of the Greco-Macedonian type in the Carpathian-Danubian region is not specific to the Getae between the Danube and the Black Sea' (Preda 1985, 317–318) has become outdated today.

During the 2nd and 1st centuries BC, in the contact area on both sides of the Danube, Geto-Dacian coinage found a crossing point where, theoretically, coins from other issuing authorities (such as Istros, Kallatis, Tomis, Dionysopolis, etc.) covered the needs reflected by local trade (Conovici 1979, 87–93).

The political and military changes during the 2nd and 1st centuries BC had significant implications for the relationships between Greek and Getic communities. It is already known and demonstrated that the most prosperous period in terms of quantity and quality, with intense habitation for the *davae* located in the area of Eastern Dacia, belongs to the end of the 2nd century and the beginning of the 1st century BC, until the Dacian-Roman conflicts in the late 1st and the early 2nd centuries AD. (Mihăilescu-Bîrliba 1993, 291–296; Mihăilescu-Bîrliba 1998, 117).

It should be noted that strong connections existed between the communities on both sides of the Danube, with the left bank being heavily populated and benefiting from significant economic and trade activities.

The territory of Dobrudja is part of the resonance area of Geto-Dacian coinage, partly due to the presence of a functional workshop within indigenous communities and partly due to the presence of silver pieces specific to several coin types, especially in Wallachia, Moldavia, and the northern part of Thrace. All Geto-Dacian coins that entered Dobrudja are characterised by their highly stylised representations compared to the Greco-Macedonian prototypes.

Although it has been suggested that these coins were in circulation, we remain cautious because we believe that we are witnessing their presence. This presence is complemented by the symbolic and political adoption by the local elite of a trend evident north of the river, namely the issuance of silver coins. It is purely hypothetical, but there has been the possibility of continuity between the political entity of Moskonos and the one that issued the coins of the Niculițel/Parcheș or Măcin type, despite a difference of several decades between the two coin types (Oberländer-Târnoveanu 1980, 148). Also, it seems that both types belong to the 'main phase of development of Geto-Dacian coinage, being closely related to the Prundu-Jiblea type and its adjacent series (Mihăilescu-Bîrliba 2015, 270).'

The desire to mint coins, just like the Getae north of the river, manifested itself in the Istro-Pontic territory, even among the locals. Based on numismatic evidence, we have the unique mention of Basileos Moskonos, considered the 'Thracian-Getic king (Preda 1973, 181).' The title of Basileos that he attributed to himself seems to be related to the influence exerted by numerous Macedonian sovereigns and generals, as well as Scythians, with whom the local communities came into contact starting from the 4th century BC. Regarding his ethnic origin, in addition to a Geto-Dacian component (Pippidi, Berciu 1965, 128), we cannot exclude the Celtic hypothesis as a working theory. In the specialised bibliography possible analogies were noted between the iconographic representations on the coins of the Basileos Moskonos and those appearing on a category of bronze coins of King Kavaros (Dimitrov 2010, 56–57; Lazarov 2010, 102–104, **Fig. 1/3**; Mihăilescu-Bîrliba 2015, 269).

His name, in the genitive form, appears on silver emissions, didrachms, and hemidrachms (Preda 1964, 401–402; Ocheșeanu 1970, 125–126, no. 2) which, in terms of craftsmanship, show a pronounced Greek influence, but with a limited possibility of their issuance in a West-Pontic workshop (Preda 1998, 177; Mihăilescu-Bîrliba 2015, 269). In the bibliography there is the suggestion, considering some execution clumsiness, both in iconography and epigraphy (Pippidi, Berciu 1965, 128), that the didrachms and hemidrachms known were minted in a 'local North Dobrudja mint (Ocheșeanu 1970, 126).' However, the number of known specimens is limited (Dimitrova 2019–2020, 115; Dimitrova 2021, 82). The barbaric style can be identified in didrachms, but it seems even more pronounced in the case of hemidrachms. There might be at least three die-cutting stamps and, quite evidently, three separate engravers who probably minted in a local workshop (Ocheșeanu 1970, 126). From the existing bibliography, only 'more' than four specimens are known from isolated discoveries coming from the Istro-Pontic territory, from Mihai Vitezau, Revărsarea (in the current neighbourhood of the city of Isaccea), Somova, and Tulcea. Also, in the vicinity of this locality (10 km away), at Trestenic (Tulcea County), three silver coins of the Moskonos type were found by chance, sticking together lightly (all of them are didrachms, unpublished).

Basileos Moskonos was considered a ruler who held territory in the northern part of the Dobrudja region (Preda 1973, 181), perhaps even in the vicinity of the present-day city of Tulcea (Tulcea County). It has also been suggested that the Getae in northern Dobrudja did not manage to achieve the same economic and political capabilities as those north of the Danube (Preda 1973, 270; Preda 1985, 317). We express some reservations about this theory, especially from an economic perspective. Perhaps politically, they were chronologically out of sync, but the desire to mint silver coins like those on the left bank of the Danube could have been steps taken to reduce some of the disparities. Examining the locations of these coin discoveries, we observe their alignment along the right bank of the Danube, heading north in the region from Isaccea (Tulcea

County) to Tulcea , descending towards Trestenic. Therefore, the discoveries do not extend beyond northern Dobrudja. It is possible that this sovereign directly controlled only the mentioned segment, and the broader area of the Măcin Mountains was probably only supervised. This may have begun as early as the mid-3rd century BC. The silver emissions of the Moskonos type have been considered 'an isolated and limited occurrence in space and time (Preda 1980, 339),' even though the intention to minimise and exclude the relevance of a Geto-Dacian monetary process and the presence of various types of Geto-Dacian coins from north of the Danube in the Istro-Pontic territory has not proven to be auspicious for any specialised research, as always.

Regarding the dating of coins of the Moskonos type, four clear chronological moments have been proposed up to this point, which also overlap: the last quarter of the 4th century BC (Jordanov 2014, 129), the end of the 4th century to the beginning of the 3rd century BC (Preda 1964, 406), the 3rd century BC (Preda 1980, 339; Preda 1998, 177; Lazarenko 2004, 134-135), the mid-3rd century BC (Ocheșeanu 1970, 128; Preda 1998, 181; Jordanov 2011, 202; Jordanov 2014, 140), and the 2nd century BC (Poenaru Bordea 1978, 19; Oberländer-Târnoveanu 1980, 148) (this last dating was done considering the weight standard that underlay their issuance). Starting from the association of coins of the Moskonos type with specific Geto-Dacian pieces from the second stage of operation of the mint north of the Danube, we are tempted to attribute their issuance to the 3rd century BC or the end of the 3rd century and the beginning of the 2nd century BC, probably over the course of several decades.

We do not end our small discussion regarding the presence of Geto-Dacian or Celtic types from the first phase of the coinage without mentioning an interesting hypothesis regarding the possibility that Rasa-type imitations (struck in the middle and the second part of the 3rd century BC) to have been made in today's area of Silistra, considering the discoveries that appeared on both sides of the river in the area of the Lower Danube (Preda 1973, 53; Mihăilescu-Bîrliba 2015, 264). Based on a relatively recent study, two distinct series are known within this type: an earlier one struck after 294 BC, and respectively a later one, struck before the middle of the 3rd century, around 270–260 BC (Vîlcu, Neagu 2012, 605, 612). Archaeological and monetary discoveries in these geographical areas would indicate a 'non-homogeneous and by no means static demographic complex circulating, at different times and for different reasons, various monetary categories (Isvoranu, Vîlcu 2010, 796).' However, there is an important probability of their production south of the Danube, either closer to the river, in the centre of Sboryanovo (Vîlcu, Neagu 2012, 612), or in the area of Lovech where a mint for the reverse was discovered (Șerbănescu 2017, 32). Among the monetary finds from Sboryanovo and the surroundings/the Danube area, the following pieces are worth mentioning: tetradrachms of the Adâncata-Mânăstirea type, the Vârteju-București type (?), the Inotești-Răcoasa type, the Philip III tetradrachms and imitation drachms of the Alexander III–Philip III Arrhidaeus type (hoards and isolated), Odessos and Mesambria tetradrachms (hoards and isolated), Thasos tetradrachms, Republican Roman denarii (hoards and isolated), and Dyrrhachium drachms (Dimitrov 2005, 137–150; Dimitrov 2007, 371–382; Prokopov et al. 2007, 18–27, 73, 86–87, 94–103; Dimitrov 2013, 764–766). The presence of these coins indicates the persistence over time of the connection of this centre through inter-tribal relations with the north and south of the Danube.

In general, for the isolated discoveries in the Istro-Pontic territory, the number of pieces from the first main phase of the North-Danube mint totals three, to which, if we add those produced in Dobrudja (Moskonos), we reach seven pieces. Most specimens from the isolated finds belong to the Moskonos type (four specimens), and there is only one specimen each from the Agriș, Ocnița-Cărbunești, and Huși-Vovriești types. The number of pieces from the second main phase of the North Danube mint totals over 121 pieces, to which, if we add those produced in Dobrudja, we reach over 131 pieces. Most specimens from the isolated discoveries belong to the Alexander III-Philip III Arrhidaeus type (38 pieces), followed by Vârteju-București (over 34 pieces), Inotești-Răcoasa (with 22 pieces), Adâncata-Mănăstirea (with 13 pieces), Dumbrăveni (with eight pieces), Mediașu-Aurit (with three pieces), Toc-Chereluș (with two pieces), and Rădulești-Hunedoara (with one piece).

The Niculițel/Parcheș or Măcin type can be considered either as a derivative of the Prundu-

Jiblea type and its adjacent series „a" and „b" (Preda 1998, 170–171), or it can be noted as a distinct type (Iliescu 1987, 261). Regardless of the chosen solution, it seems to be a coin type that generally belongs to the Geto-Dacian coinage (Mihăilescu-Bîrliba 2015, 270). This type exhibits stylistic similarities with the Adâncata-Mânăstirea type, both originating from Prundu-Jiblea. Additionally, it should be noted that the specimens called Niculițel/Parcheș or Măcin show differences compared to the coins of the Prundu-Jiblea type, both stylistically and in terms of the nominal features.

Chronologically, it has been suggested that they were issued from the middle of the 2nd century BC until the end of the same century or the beginning of the 1st century BC (Oberländer-Târnoveanu 1980, 145–147). According to other opinions, which question the association with the Thasian tetradrachms, this type should be stylistically situated between the Prundu-Jiblea and Adâncata-Mânăstirea types and accordingly dated to the second half of the 2nd century BC (Preda 1998, 176). The distribution of isolated discoveries in Dobrudja indicates a concentration of these pieces in the northern part of the territory, even in its northernmost extremity. The local production of Niculițel/Parcheș or Măcin-type coins would not be a technological surprise if we consider other possibly similar situations. For instance, the possibility is known from discoveries of imitations of Histrian silver coins in large indigenous centres or by itinerant minters. From our point of view, this is possible for certain spaces of the indigenous communities in Dobrudja, unfortunately few of which have been archaeologically investigated, and specifically some so-called centres of power. Tribal residences or political-administrative centres — as seems to be the complex at Floriile with points Adâncata I and II — (Irimia 2004–2005, 319–384; Irimia 2007, 152) served as places of refuge and security, including for the noble elite. And the major tribal centres (such as settlement-tribal centres) in Wallachia 'played the role of political, religious, and economic cores for the surrounding rural settlements (Conovici 1986, 79).'

The Geto-Dacian Dumbrăveni type corresponds to the category of coins issued in the area of Extra-Carpathian Dacia and is known from the hoard discovered in 1966 in the eponymous locality (Preda, Constantinescu 1968, 21–45). It is a new creation without any direct affiliation to a previous coin type, although there has been a suggestion of its possible connection to a transitional stage, with stylistic elements associated with the Prundu-Jiblea, Vârteju-București, and Inotești-Răcoasa types (Preda 1998, 179). Additionally, it appears to have been minted in a centre (considered a 'tribal political entity or tribal union') located in the area between the lower Siret and Buzău Rivers (based on the density of coin discoveries), around the middle of the 2nd century BC (Preda, Constantinescu 1968, 37; Preda 1973, 197; Preda 1980, 336). There are also opinions that suggest its issuance until around the middle of the 1st century BC (Mihăilescu-Bîrliba 1990, 118; Părpăuță 2006, 88). We should also note a recent proposal that dates this coin type much earlier (Isvoranu, Matei 2018, 161). The discovery areas of Dumbrăveni-type coins in southern Moldavia and northeastern Wallachia could belong to the kingdoms of Zalmodegikos and Rhemaxos (considering the presence of *davae* like those at Poiana, Barboși, Cândești, and Cârlomănești), a speculation that seems to be confirmed by other opinions as well (Preda 1973, 197–198, 268–270; Mihăilescu-Bîrliba 1990, 76). The Geto-Dacian Dumbrăveni coin type is contemporaneous with the Adâncata-Mânăstirea type. The type is present in discoveries in Dobrudja in eight locations. Four specimens (50% of the total) were found on the right bank of the Danube, and two specimens (25% of the total) on the coast.

The Adâncata-Mânăstirea type received its name from two hoards discovered in Adâncata and Mânăstirea (Preda 1973, 199–203, 378). Like the previous type, it appears to have stylistically borrowed elements from the Prundu-Jiblea type (Iliescu et al. 1965, 6–12). It was issued by a native political centre (a large tribal union) which, based on the density of coin discoveries, was located in the western half of the Wallachia territory, near the Olt Valley, with possible extensions towards the Jiu Valley (Preda 1973, 212–213; Preda 1998, 183–184). Chronologically, the coins belonging to this type are dated between the mid and the second part (decades two to three) of the 2nd century BC (Preda 1973, 213). Some opinions suggest that this coin type could have been issued between the mid-2nd century BC and the end of the 1st century BC (Mihăilescu-Bîrliba 1990, 118; Părpăuță 2006, 90). Their presence in a wide area of discoveries has made

them the 'most reliable and common emissions in the local coinage of Dacia (Preda 1973, 214).' There are a total of thirteen pieces from this coin type present in isolated findings in Dobrudja, found in nine locations. Four examples (61.53 % of the total) were discovered on the right bank of the Danube. There are no pieces in the coastal area.

The Vârteju-Bucureşti type received its name based on the hoard discovered in the village of Vârteju — now a former village integrated into the town of Măgurele, Ilfov County during the year 1953 — consisting of 280 specimens (Mitrea 1954, 290–302). Characterised by a pronounced schematic style, the silver pieces are found in numerous Getic settlements that appear to be contemporary from a chronological point of view (Preda 1973, 215). Within the hoards, we only note two settlements: Tinosu (Prahova County) and Cârlomănești (Buzău County) (Isvoranu et al. 2010, 7–34). Stylistically, they continue the iconographic execution traits of the Adâncata-Mânăstirea type (Mihăilescu-Bîrliba 1990, 77).

Their minting, including the several dozen cast pieces (Isvoranu et al. 2010, 10–11), seems to have been carried out in a single large official mint with a lower silver content, probably due to the need to mint a large number of coins to meet existing demands (Preda 1973, 233–234). This mint should be directly located in a local Geto-Dacian centre, possibly in the central region of Wallachia, with two concentrations of coin discoveries located in the lower course of the Argeș River and the upper courses of the Prahova and Ialomița Rivers (Preda 1973, 188, 192, 233, 242–243). Also, in the specialised bibliography, the density of discoveries of Vârteju-Bucureşti type coins was considered to be 'especially remarkable in the north-east of Bulgaria (Mihăilescu-Bîrliba 2015, 264).' There is also the opinion that the density of their discovery south of the Danube and in the territories between the Danube and the Carpathians is either the result of commercial contacts between both banks of the Danube in the state of King Kavaros, or prizes offered by the same king for 'distinguished commanders or warriors in battles, who later returned to their native places (Manov 2018, 253–254, 260).'

The dating of the coins of the Vârteju-Bucureşti type begins around the middle or the next three decades of the second half of the 2nd century BC and ends around the second or third decades of the 1st century BC (Preda 1973, 245). According to other opinions, it is very possible that these pieces continued to be used until around the middle of the 1st century BC (Mihăilescu-Bîrliba 1990, 79) or even in the second half of the same century (Părpăuță 2006, 94), remaining in 'circulation' even after their specified date of issue (Preda 1973, 245).

A particular aspect of some specimens of coins of this type discovered in Dobrudja is their presentation form known as 'fourrées.' However, they are not very numerous, and the observed situation is not an exception. To the east and south of the Carpathians, such pieces appear in the settlements of the indigenous population, such as those in Poiana (Galați County), Popești (Giurgiu County), and Zimnicea (Teleorman County) (Preda 1973, 234; Mihăilescu-Bîrliba 1990, 77–78). Metallographic analyses conducted for specimens of the Vârteju type have revealed a possible silver content of 50% or even less (Mihăilescu-Bîrliba 1990, 80).

A total of over 34 pieces of this monetary type are present in the isolated discoveries in Dobrudja (**Fig. 2**), found in 18 locations. A number of 22 specimens (64.71% of their total) are discovered on the right bank of the Danube or in the immediate vicinity, six specimens in the central and southern area (17.65%), and three specimens (8.82% of their total) on the littoral coast.

The Inoteşti-Răcoasa type is named after two significant hoard discoveries in Inoteşti and Răcoasa (Severeanu 1926, 7–10; Preda, Dragomir 1975, 27–40). Stylistically, the emissions of the Inoteşti-Răcoasa type used the model of coins from the Adâncata-Mânăstirea and Vârteju-Bucureşti types (Mihăilescu-Bîrliba 1990, 79; Preda 1998, 194), bringing original elements with technological influences from other sources (Isvoranu et al. 2010, 26, 30). The majority of coin discoveries are concentrated between the lower courses of the Siret and Buzău Rivers (Preda 1973, 248), specifically in two centres around the city of Buzău and between the Argeş and Ialomiţa Rivers (Preda 1973, 266; Mihăilescu-Bîrliba 1990, 80). In other words, the political entity (a possible tribal union) that minted such coins should be sought in the southern half of

Moldova and the eastern part of Wallachia, without significantly ascending into the mountainous area (Preda 1973, 268). The mentioned geographical area (possibly more towards northeastern Wallachia) has been proposed as belonging to the formation led by Zalmodegikos and then by Rhemaxos. Recently, it has been emphasised that these coins appear particularly isolated in *davae*-type settlements (Isvoranu et al. 2010, 30). Their dating falls within the range delimited by the end of the 2nd century and the first half of the 1st century BC (the first two decades) (Mihăilescu-Bîrliba 1990, 81; Preda 1998, 187), in the context of the unification of all the Geto-Dacian elements under the leadership of Burebista (Preda 1960, 71; Preda 1971, 75–76; Preda 1973, 404–406; Preda, Dragomir 1975, 38). There are also different opinions regarding their issuance, possibly extending until the mid-1st century BC or 'even more recently,' at the end of the 1st century BC and even the beginning of the 1st century AD (Mihăilescu-Bîrliba 1990, 81, 118).

**Fig. 2.** Isolated monetary discoveries of the Vârteju-București type in the Istro-Pontic territory.

**Fig. 3.** Isolated monetary discoveries of the Inotești-Răcoasa type in the Istro-Pontic territory.

A total of 22 pieces of this monetary type are present in the isolated discoveries from the Istro-Pontic territory (**Fig. 3**). The type is present in the discoveries from the Istro-Pontic territory in 16 locations. A number of 14 specimens (63.64% of their total) come from the area of the right Danube bank and its surroundings, and from the central and southern area we retain only five specimens (22.73%). Two other specimens come from the coastal area (9.09 %).

The only specimens that do not constitute imitations of the tetradrachms of Philip II are those from the monetary type of Alexander III-Philip III Arrhidaeus. They copy the obverse and reverse of the coins of Alexander III and Philip III Arrhidaeus (most likely the prototype is Philip III Arrhidaeus). They are known in two variants, by mode and weight, tetradrachms and drachms.

Their presence is felt in discoveries on both banks of the Danube, almost equally (Preda 1998, 215–216). The coins from the Alexander III-Philip III Arrhidaeus type were produced by the Thracians in the area of Ruse-Razgrad-Tarnovo (Dragoev 2013, 99–103; Dimitrov 2007, 371; Prokopov et al. 2007, 18–27, 73, 94–103; Dimitrov 2013, 712–721, 764; Prokopov 2021, 213–214) or perhaps even north of the Danube through itinerant workshops for the Getic population in the lower Argeș area (PREDA 1998, 216). Their circulation north of the Danube reflects the good relations between various Getic tribes or tribal unions (Preda 1980, 337). Such coins were issued starting from the mid-2nd century BC until the end of the same century (Preda 1973, 343). Additionally, in certain contexts, it is possible that such specimens circulated in the 1st century BC, citing inter-tribal exchanges during its early period (Preda 1973, 343; Preda 1998, 216). Furthermore, the possibility of even more recent issuance and circulation has not been ruled out. Of interest to our research are the drachms that extend into the first decades of the 1st century BC; their significant presence in the North Danubian market would suggest an 'evolution in the currency-based transaction system in North Danubian communities.' (Iliescu 1983, 15) The drachms/imitations from the Alexander III-Philip III Arrhidaeus type have been found north of the Danube in association with Thasian, Apollonian, and Dyrrhachian emissions, Thasian imitations, Roman Republican denarii, and early imperial Roman bronze coins from the first half of the 1st century AD (Părpăuță 2006, 111).

A total of 38 pieces (nine tetradrachms and 29 drachmas) are present in the isolated discoveries from the Istro-Pontic territory of this monetary type, found in 15 locations. A quantity of 17 specimens (44.74% of their total) was discovered on the right bank of the Danube or in the surroundings, 11 specimens in the central and southern area (28.94%), and four specimens (10.53% of their total) on the littoral coast. As can be readily observed, most of the specimens from this coin type are drachms.

As sites with finds, we identify the presence of coins in important autochthonous open and fortified settlements located on the banks of the Danube or in the immediate vicinity. We note here a quanity of 46 specimens, which represent 34.35% of the total of those discovered of all types present in Stage II. For each fortified settlement in the analysed Danube area, we record the following situations: Floriile (Constanța County) with 16 specimens (34.78% of the total of those discovered in the settlements), Izvoarele (Constanța County) with eight specimens (17.39% of the total of those found in the settlements), Satu Nou (Constanța County) with seven specimens (15.22% of the total of those discovered in the settlements), Silistra (Bulgaria) and Ostrov (Constanța County) with seven specimens each (15.22%), Dunăreni (Constanța County) with six specimens (13.05% of the total of those discovered in the settlements), and Coslugea (Constanța County) with two specimens (4.34 %).

As observed in the specialised literature, 'the low number of isolated coin discoveries belonging to North and South Danubian types on the coast or in its immediate vicinity does not represent a significant monetary phenomenon, as these can only be considered residual manifestations in the monetary circulation of the studied area(Mihăilescu-Bîrliba 2015, 267).' The new findings confirm this situation, with their numbers being very small in relation to the Danube's banks and the central zone. Similar to the interior of the Carpathian arch, it is noteworthy that the discovered pieces in Dobrudja are generally small denominations.

It's not just the accumulation of isolated Geto-Dacian coin discoveries on the right bank of the

Danube that needs to be emphasised. The central and southwestern region of Dobrudja preserves numerous archaeological remains specific to all known historical epochs in the evolution of human communities. The chronological interval analysed in this work is quite rich in terms of historical and cultural context. This situation can be explained by the presence, on the one hand, of Greek or strongly Hellenised populations and, on the other hand, of the local population — predominantly the Getae — in fortified and open settlements. The presence of communication routes from the Greek cities on the Pontic coast towards those in the central zone of Dobrudja (land routes) and the connection with the Danube waterway (fluvial navigation) favoured the development of rural settlements in the area.

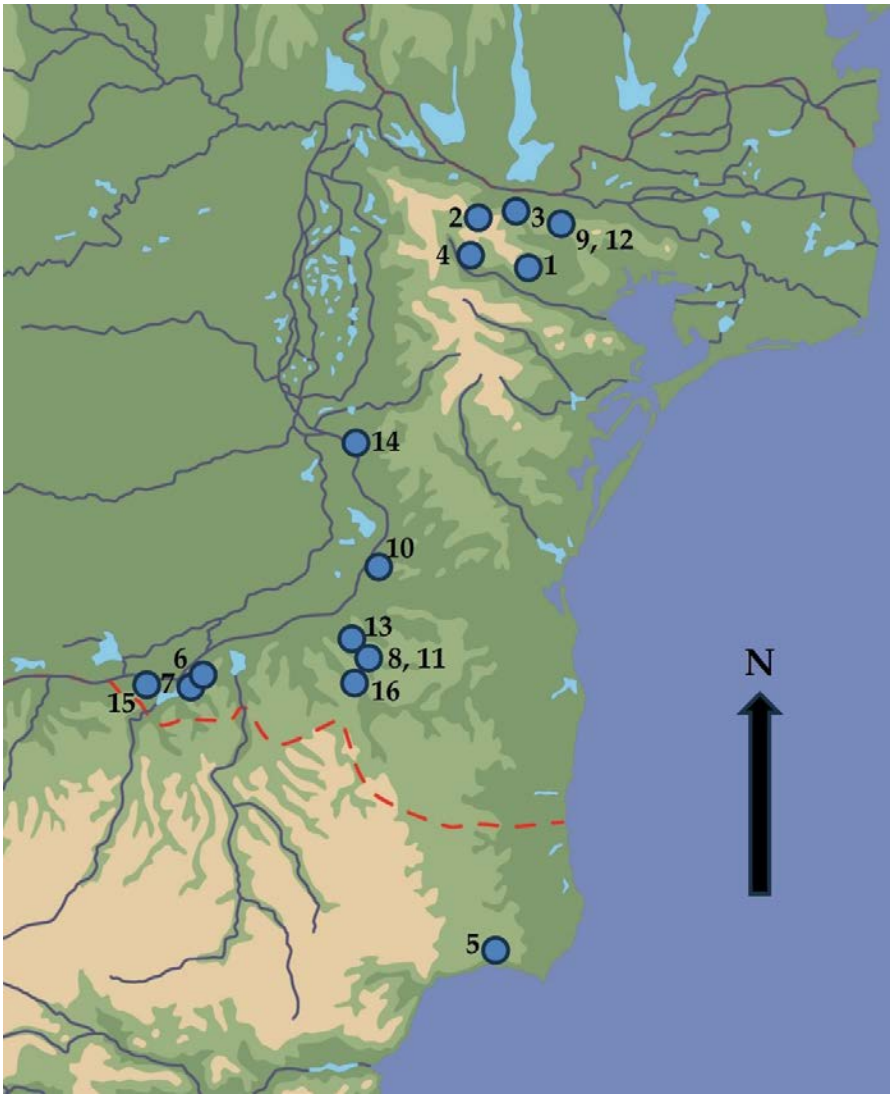


**Fig. 3.** Map of Celtic and Geto-Dacian monetary hoards discovered in the Istro-Pontic territory in the 3rd–-1st centuries BC. (1. Trestenic – Moskonos type; 2. Niculițel, 3. Parcheș, 4. Valea Teilor – Niculițel-Parcheș or Măcin type; 5. Cavarna, 6. Izvoarele- – Adâncata-Mănăstirea type; 7. Canlia, 8. Hațeg, 9 Somova - Vârteju Bucharest type; 10. Cochirleni, 11. Hațeg, 12. Somova - Inotești-Răcoasa type; 13. Floriile, 14. Hârșova, 15. Ostrov and 16. Urluia - Alexander III - Philip III Arrhidaeus type.

For the first stage of the Geto-Dacian North-Danubian or Celtic mint, we initially retain a single monetary hoard composed of tetradrachms of the Agriș type (**Fig. 4**). From the vicinity of the city of Silistra, namely in the outskirts of the village of Kalipetrovo, a hoard was discovered under random conditions during maintenance work in the industrial area to the north. This hoard, contained in a domestic vessel, comprised 12 pieces of the Agriș type (Agriș B-Șilindia), of which only two were recovered. Additionally, a hoard from Trestenic, discovered by chance before 2002, contained three coins of the Moskonos type (two didrachms and a hemidrachm).

The hoards from the second stage of the Geto-Dacian mint are much more numerous, and we can add the Getic ones produced in the Istro-Pontic territory (**Fig. 4**). We refer to those containing coins of the Niculițel/Parcheș or Măcin type — four in number — that were discovered at Niculițel (Tulcea County), Parcheș (Tulcea County), and Valea Teilor (Tulcea County). The first one from

Niculițel was discovered before 1970, and the number of specimens is unknown (Oberländer-Târnoveanu 1980, 144). The second one from Niculitel was discovered at the 'Sarica' locality, being made up of Măcin type coins associated with Thasian coins and their imitations (Oberländer-Târnoveanu 1980, 144). The one from Parcheș consisted of about 70 silver coins, of which only one Măcin type coin was recovered. A total of 16 coins of the Măcin type were discovered in the area of Valea Teilor between the years 2003–2005, without any other usable landmark. However, there is information that the specimens belong to the two phases (1 and 2), with ten specimens from the first phase and six from the second (Talmațchi 2008, 478–479, nos. 1–16).

Regarding the rest of the hoards composed of silver pieces made in the Geto-Dacian space from (or also from) the north of the Danube, information exists for a total number of 15 — namely Somova (Tulcea County, two hoards), Canlia (Constanța County), Cavarna (Dobrici Region), Cochirleni (Constanța County), Floriile, Hațeg (two hoards), Hârșova (Constanța County), Izvoarele, Ostrov, the Silistra area (two hoards), Urluia (Constanța County), and Dobrudja (Constanța County). The Adâncata-Mănăstirea type occurs in Cavarna, Izvoarele, and Dobrudja; the Vârteju-București type occurs in Canlia, Hațeg, and Somova; the Inotești-Răcoasa type occurs in Cochirleni, Hațeg (Constanța County), and Somova; the Mediești-Aurit type occurs in the Silistra area (Popkralevo); and the Alexander III-Philip III type appears at Floriile, Hârșova, Ostrov, and Urluia, etc. There are no hoards containing Dumbrăveni coins.

Regarding the one discovered in Somova and published in 2008, several substantial changes need to be made compared to the initial publication, especially concerning the number and adjacent composition. Initially, primary data supported the discovery in 2006, in the vicinity of Somova (Tulcea County), near the 'La Batace' locality, where a settlement and a necropolis dating back to the Latène period are attested (LMI III, 2281, no 405–406). The respective hoard consisted of several dozen Geto-Dacian silver coins. Initially, 24 coins of the Vârteju-Bucureşti type, 13 coins of the Inoteşti-Răcoasa type, 16 specimens of the Niculițel/Parcheș or Măcin type, and last but not least, three silver pieces of the Moskonos type (two drachms and a half drachm) were primarily identified. In total, 57 silver coins of the mentioned types were recorded. Subsequently, based on new information, a total reevaluation of this discovery was conducted. The hoard discovered in 2006 remains certain, but its composition was found to consist either solely of silver coins of the Vârteju-Bucureşti types or solely of iron coins of the Inoteşti-Răcoasa type. All of these — a total of 37 observed by us for a very short time in 2007 — would actually have amounted to around 120–130 specimens. Under these circumstances, the content of the accidental discovery is limited to the previously mentioned 37 specimens, and even these are only partially known. The three silver coins of the Moskonos type were also discovered accidentally together (but this information is not certain) not far from the locality of Somova, in the vicinity of Trestenic. However, due to their dating to the 3rd century BC, they are not currently the subject of our study. In conclusion, compared to the previous publication, the former hoard from Somova can actually be divided into four hoards. The first one contains only coins of the Vârteju-Bucureşti type (late variant, at Somova), the second one contains only coins of the Inoteşti-Răcoasa type (at Somova, **Fig. 5**), the third one contains only specimens of the Măcin type (at Valea Teilor), and the last one is a small hoard composed only of silver coins of the Moskonos type (at Trestenic). Based solely on the observations and notes made in 2007, we were able to make limited observations about the general appearance of the specimens and their numismatic and historical importance. Perhaps over time, more useful information will emerge.

In Kavarna, in 1910, a hoard composed of 42 silver coins of the Adâncata-Mânăstirea type was discovered (Mušmov 1911, 281–282). At Izvoarele on the Danube bank, 3 km downstream from the town and south of the high terrace at Dealul Nichita near Gura Bala, four Geto-Dacian tetradrachms of the Adâncata-Mânăstirea type were discovered over several years (1999–2001). These findings remain unpublished. In 1903, a hoard composed of 240 Geto-Dacian coins was found in Constanța County. Based on the described image, they could be coins of the Adâncata-Mânăstirea type (**Fig. 3-7**).[1]

[1]The discovery was integrated into Dobrudja, see Moisil 1914, 55; Moisil 1916, 122, 141.

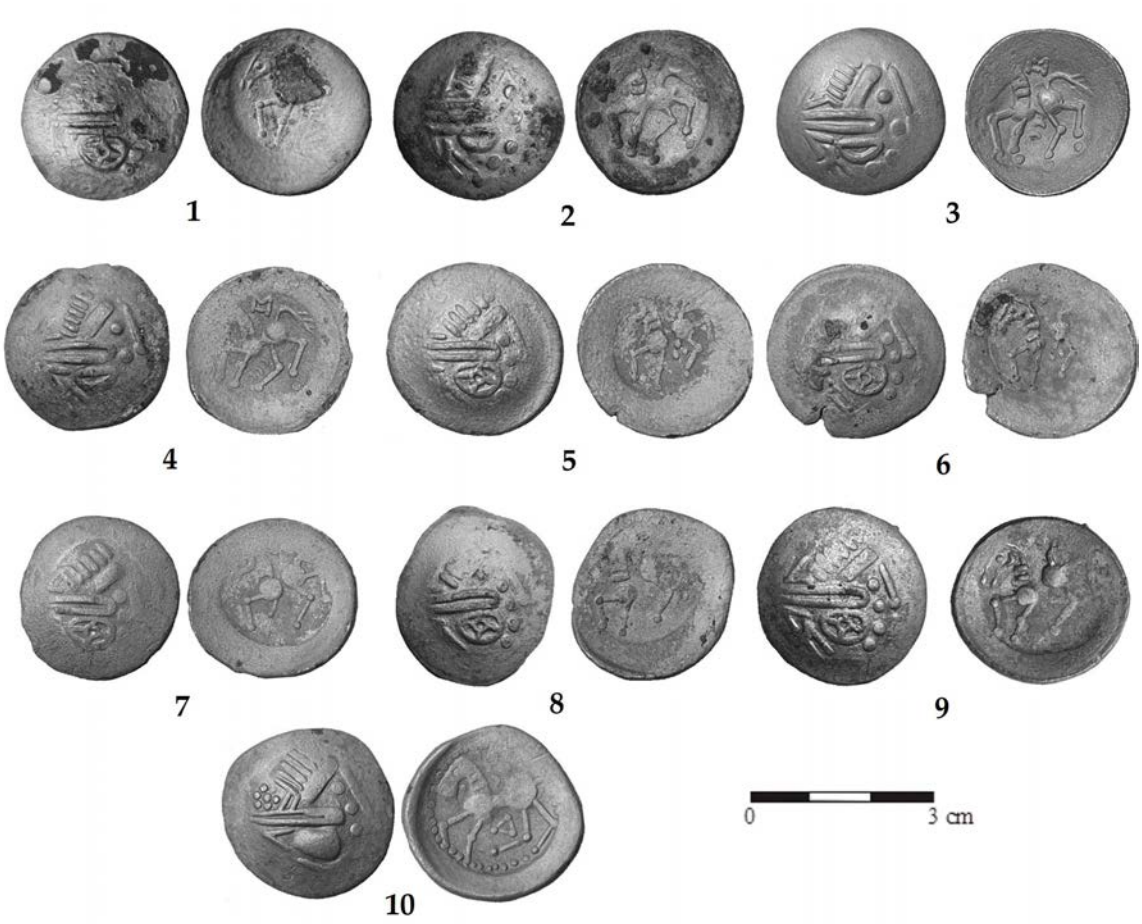


**Fig. 5.** The monetary hoard composed of pieces of the Inotești-Răcoasa type discovered in Somova.

At Canlia, in the area known as Gura Canliei, on the opposite side of a slope facing the Danube, where a Roman-era fortified settlement is attested, three tetradrachms of the Vârteju-București type were accidentally discovered over several years before 1990. These findings possibly originated from a Latène-type necropolis and remain unpublished. It is highly possible that they belonged to a burial inventory and, consequently, can be considered a small burial hoard. Approximately four decades ago, in the northwest outskirts of the village of Hațeg, a small hoard composed of five Geto-Dacian specimens of the Vârteju-București type was discovered (unpublished).

In the hoard from Cochirleni, a large number of Geto-Dacian coins were present, from which 'four Geto-Dacian silver pieces were recovered, originating from a hoard discovered in 1940, in a black pot, at a depth of 6 m on the banks of the Danube' (Grămăticu 2015, 152–162). The rest have scattered over time. All four silver coins belong to the Inoteşti-Răcoasa type.

In Hațeg, near the village at the site Baciului Valley-Dealul lui Văleanu, a hoard of six silver coins of the Inotești-Răcoasa type was discovered under unclear conditions before 2011, excluding archaeological excavations. (Talmațchi 2023, 259–263). On the occasion of the discovery of the hoard, different fragments of Latène-type Getic ceramics of varying size, dispersed on the surface of the ground, would have been collected from the site. Near the village of Popkralevo, to the north-northeast and also in the Silistra region, a hoard composed of five silver coins of the

Mediești-Aurit type was discovered (unpublished).

At Floriile, between the end of the 20th century and the beginning of the 21st century, a hoard consisting of seven Geto-Dacian drachms of the Alexander III-Philip III Arrhidaeus type was discovered on a slope bordering the Polucci Valley, approximately 2 km from the Adâncata I and II sites (unpublished). In the late 1980s and early 1990s, a small hoard of 16 drachms/imitations of the Alexander III-Philip III Arrhidaeus type was found by chance in the terraced hills planted with vineyards, approximately 4 km east of the border with Bulgaria and the entrance to Silistra, in the territory of Ostrov (**Fig. 6**, unpublished).

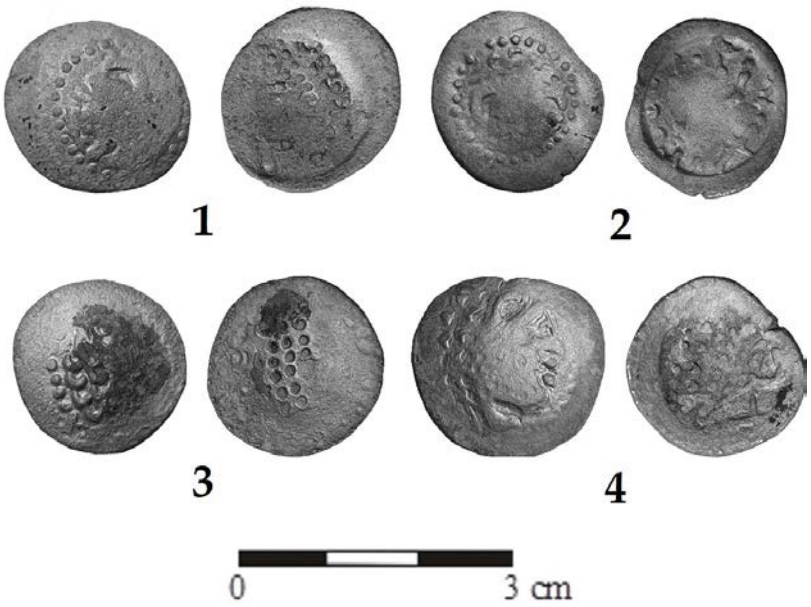


**Fig. 6.** The monetary hoard composed of drachmas of the Alexander III-Philip III Arrhidaeustype discovered in Ostrov/Silistra.

**Fig. 7.** The monetary hoard composed of drachmas of the Alexander III-Philip III Arrhidaeus type discovered in Hârșova.

About 3–3.5 km from the northern edge of the village of Urluia, a small hoard was fortuitously discovered, consisting of five silver pieces, including four drachms and one tetradrachm of the Alexander III-Philip III Arrhidaeus type (unpublished).

The hoard from Hârşova was accidentally discovered in the years 1993–1994. It consisted of six drachms/imitations of the coin type Alexander III-Philip III Arrhidaeus and appeared towards the upper part of the hill at Celea Mică, on the edge of a slope after several heavy rains (**Fig. 7**). Given the accidental nature of the hoard's discovery and the impossibility of knowing any archaeological context, it is believed that the hoard was hidden or lost in the second half of the 1st century BC or at the beginning of the 1st century AD (Talmațchi 2008, 483–484).

A final hoard was reportedly discovered in Garvăn (Silistra Region) in 1912, on the outskirts of the town. It consisted of Roman Republican denarii (approximately 100 specimens), a few unspecified Geto-Dacian imitations, and a silver bracelet. This hoard is probably dated to the years 20–10 BC, during the period of Augustus. Unfortunately, as mentioned earlier, the specific Geto-Dacian imitations are not detailed, so they cannot be connected to a distinct coin type specific to the second final stage of the coinage development north of the Danube (Paunov, Prokopov 2002, 50, no. 77).

In total, among the hoards from the second stage of the Geto-Dacian mint, approximately 382 silver coins of the Adâncata-Mănăstirea, Vârteju-București, Inotești-Răcoasa, Mediești-Aurit, and Alexander III-Philip III Arrhidaeus types produced outside the Dobrudjan area are to be catalogued. For each monetary type, the situation is as follows: 286 pieces of the Adâncata-Mânăstirea type (74.87% of the total), 32 pieces of the Vârteju-București type (8.37% of the total), 23 pieces of the Inotești-Răcoasa type (6.02% of the total), five pieces of the Mediești-Aurit type (1.31%), and 36 pieces of the Alexander III-Philip III Arrhidaeus type (9.42% of the total).

All known Geto-Dacian coin hoards discovered in Dobrudja, except perhaps the one in Garvăn, are exclusively composed of Geto-Dacian coins, minted or cast in the second half of the 2nd century BC and found in contexts typical of the 1st century BC. As found in discoveries in other geographical areas, Geto-Dacian or 'barbarian' monetary hoards contain a small number of component pieces, perhaps happily a few dozen. Their number is rarely greater.

## Conclusions

The Geto-Dacian coins reached the northeasternmost extreme of Thrace, likely following patterns established north of the Danube. The coins found in hoards seem to represent sums or valuable goods that were already assembled in distant environments and appear to have entered at least some tribal noble residences with similar coagulation, in the context of the existence of a military force.

It was generally known in the specialised literature, based on data provided by Constantin Preda, that in the second phase of Geto-Dacian coinage, the silver content gradually and significantly decreased. Additionally, the same researcher proposed a hypothesis regarding the source of the silver used in Geto-Dacian coinage, namely the Apuseni Mountains region, as 'some of the major hoards are concentrated around or not far from the same geographical area (Preda 1985, 325).' More recent analyses have provided a new metallographic characteristic of interest for the study of these coin types. Specifically, variable concentrations of the main compositional elements were observed, which would likely indicate 'a lack of homogeneity likely due to a rudimentary technique of creating the alloy for coinage (Isvoranu et al. 2010, 27).'

Unfortunately, a significant portion of the Geto-Dacian coin finds in the Istro-Pontic region appear in fortuitous or even unclear contexts. One intriguing observation is that Geto-Dacian pieces discovered during archaeological excavations appear in irrelevant contexts or have no connection with the actual period of the coins' circulation or presence (Talmațchi 2006, 62). Could this be a mere coincidence or an expression of a concrete reality? It's possible that during the Roman era, especially in its early stages and given the shortage of currency, such coins were used primarily as 'silver coins' in transactions, especially in rural regions. Alternatively, they might have been retained as a form of silver wealth, a small silver reserve that could be realised

in certain contexts. These coins are often heavily worn, with minimal iconographic details or legends on both the obverse and reverse sides, making them useful in a later era due to the lack of identifying elements.

For the indigenous population, coins represented a genuine revolution in their daily lives, introducing the concept of a potential medium of exchange within their communities, albeit in the few areas where they actually functioned in this manner. Although not always, the coins played a role consistent with their theoretical value and function. Through hoarding, coins represented an accumulation of resources significant to the local society. These hoards allowed the development of stable organisational forms around nuclei, ultimately leading to the creation of political and military forces (or the certification of the supremacy of the noble caste), led by tribal chiefs or tribal unions. Gradually, due to their military strength, these leaders began to assert claims over the agricultural and financial resources of Greek cities, already understanding the true importance of currency.

Furthermore, the influx of goods through various trade routes led indigenous people, or at least a portion of their elite, to adopt the Greek way of life and the characteristics of the Hellenistic world. These economic and trade relationships evolved depending on the irreversible changes occurring within local communities, changes that these relationships often accelerated, and that had a strong local impact. However, these relationships were binary, involving the exchange of local products through barter, traded for luxury Greek goods, or through payment with fixed metal means. These coins bore symbols, ethnic markers, and the preferred deities of the respective Greek city-states on their obverse and reverse sides. Greek coins, beyond their financial and economic role, served as instruments of propaganda and power in local environments. In any case, a well-established trade has been identified through the presence of Greek imports and the creation of a market sensitive to quality products. Starting in the 4th century BC and continuing in the following centuries, Greek imports can be detected in virtually all settlements and funerary inventories of local necropolises in Dobrudja.

In general, the presence of Geto-Dacian coins in the Istro-Pontic territory is the most accurate term to define the nature of these monetary discoveries. However, we consider such a position slightly exaggerated, given the nature of the local environment in the Istro-Pontic region and the coexistence — including economic and commercial interactions — between the Getic population and the Greek population. The observed penetration of coins in various instances in the chora and throughout the Dobrudja region during the pre-Roman period does not rule out the existence of sporadic, localised (as seen, for example, in the massive fortified centre identified at Floriile, with the Adâncata I and II sites) forms of possible monetary circulation. Without claiming this as an infallible theory, the diverse coin discoveries, including many in bronze and impressively numerous, contribute to the realisation of a possible circulation that, due to objective causes, did not develop in a favourable environment. This non-development coincided with the local political and military decline and the inevitable establishment of Roman authority in the region and the entire Istro-Pontic territory. We're not only analysing coins made of noble metals, since many specimens found in the local Dobrudja environment are made of bronze. Bronze is a durable alloy that supported retail trade in Western Pontic Greek cities, in the corresponding chora, and also in more distant geographic locations, occasionally on trade routes sustained and travelled by Greek merchants, in peripheral fortified centres.

The Danube River played a significant role in the movement of products, coins, and Hellenistic influences, serving as the primary economic and commercial communication route for both the Getic and Greek populations. The introduction of Greek coins into the indigenous environment, especially in the Hellenistic period, led to their relatively common use on a case-by-case basis. Against the backdrop of the presence of coins from Istros, Tomis, Callatis, and Macedonia in the region, emissions of North Danubian Geto-Dacian types also appeared. We don't know how important their role was at the local level (especially given their relatively small numbers), but we know that they were introduced into contexts where there were susceptibilities regarding the existence of embryonic monetary exchanges. They also reached clearly non-circulatory spaces, where their role seems shrouded in political and even religious aspects. Once removed

from an actual monetary context, these coins were lost forever in hoards. Taken out of context and placed in a completely different environment oriented towards storage and hoarding (and perhaps exchange), the coins lost their characteristics for which they were minted (the Greek coin). In such a situation, the coin has no connection to the dynamics of monetary economics or actual monetary circulation. Regardless of their origin, the term 'monetary circulation' is rarely specific to the monetary realities within local communities for the analysed chronological interval, as numerous characteristics of the phenomenon are not met when considered as such. We emphasise once again that the silver coins specific to the late stage of the Geto-Dacian coinage experienced local distribution within the territories north of the Danube, between different communities, mainly to regulate political rather than commercial relations.

Furthermore, the increase in the number of monetary discoveries through archaeological excavations, surface research, and chance finds will complete the picture of the diffusion of these emissions in the studied areas. It must be noted that we probably do not have certainty regarding the reception of all existing discoveries, but in the given context, we believe we have a quasi-complete and relevant inventory, with conclusions and observations based on a stable monetary population. One difficulty in our endeavour is due to the incomplete publication of many of these discoveries, sometimes with mere mentions and no further details. The relevant recording of various materials and their publication is expected to provide, over time, a richer platform for future discussions and interpretations regarding the role, place, and importance of Geto-Dacian coins that penetrated the local Dobrudja environment, as well as coins of the same Dobrujan type, in politically and commercially significant spaces during the 2nd to 1st centuries BC.

Geto-Dacian coins ceased to penetrate the Istro-Pontic region only when Burebista achieved the economic and political unification of the territory north of the Danube, putting an end to the variety of Geto-Dacian, political, and ethnic coinage, coinciding with the end of traditional Geto-Dacian coinage. However, some coins continued to be used as possible silver reserves, without a specific course, during the early days of Roman imperial authority.

**Bibliography**

Conovici, N., 1979. Contribuții numismatice privind legăturile Histriei cu geții de la Dunăre în secolele VI-II î.e.n. SCIVA 30/1, 87–94.

Conovici, N., 1986. Așezări fortificate şi centre tribale geto-dacice din Muntenia (sec. IV î.e.n.-I e.n.). Istros 4, 71–87.

Dimitrov, K., 2005. Imitations of Greek Coins in the Getic State with Capital Helis?. Thracia 16, 137–150.

Dimitrov, K., 2010. Celts, Greeks and Thracians in Thrace during the 3rd century BC. Interactions in history and culture, in Vagalinski, L. (ed.), In Search of Celtic Tylis in Thrace (III c. BC). Proceedings of the Interdisciplinary Colloquium arranged by the National Archaeological Institute and Museum at Sofia and the Welsh Department, Aberystwyth University, held at the National Archaeological Institute and Museum, Sofia, 8 May 2010, NOUS Publishers Ltd., Sofia, 51–66.

Dimitrov, K., 2013. Antični moneti ot rajona na Nove (Miziâ), sečeni predi osnovavaneto na rimskiâ voenen lager (V v. pr. Hr.-41 g. sl. Hr, in Rabadžiev, K.K. (ed.), Sbornik v pamet na akademik D. P. Dimitrov. Sofia, BAN. Arheologičeski institut s muzej; Sofijski universitet Kliment Ohridski, Sofia, 712–766.

Dimitrov, K., 2017. The getic territory of Sboryanovo, northeast Bulgaria, in the late hellenistic age (2nd century BC–1st century AD). Thracia 17, 369–390.

Dimitrova, S., 2019–2020. Historiographic observations on the Northern Thracian Βασιλεὺς Μοσκων, Orpheus-Journal of Undo-European and Thracian Studies, in honour of Rumyana Georgieva as 70th anniversary 26–27, Sofia, 114–125.

Dimitrova, S., 2021. Numismatic sources for the North Thracian rulers (problems of "translation" and interpretation), in Delev, P., Boteva-Boyanova, D., Grozdanova, L. (Eds.), JUBILAEUS VIII, Back to the sources, In memory of the Editors of "Sources for the Ancient History and Geography of Thrace and Macedonia", on the occasion of the 70th anniversary from the publication of the second extended version in 1949, Part 2: Archaeology and Numismatics. St Kliment Ohridski University Press, Sofia, 81–91.

Драгоев, Д., 2013. Късноелинистическа монетна находка от Русе, in Върбанов В. (съст.), Sexaginta Prista, I, Тракийски ямен комплекс, „СИРА", Велико Търново, 99–103.

Grămăticu, S., 2015. Monede descoperite la Cochirleni, com. Rasova, jud. Constanța. Revista de Cercetări Arheologice și Numismatice 1, 152–162.

Iliescu, O., Isăcescu, E., Gramatopol, M., Popescu, C., 1965. Cabinetul Numismatic, Creșterea colecțiilor, Caiet selectiv de informare, 13–14, iulie-decembrie, București.

Iliescu, O., 1983. Stadiul economiei monetare a societății geto-dacice în a doua jumătate a sec. al II-lea î.e.n. Cercetări Numismatice 5, 7–24.

Iliescu, O., 1987. Precizări cu privire la rezultatele unor cercetări de numismatică geto-dacică. SCIVA 38/3, 259–275.

Irimia, M., 2004–2005. Descoperiri getice în zona Adâncata (com. Aliman, jud. Constanţa). Pontica 37–38, 319–384.

Irimia, M., 2007. Considerații privind așezările getice din Dobrogea şi problema existenței unor emporia în zona Dunării inferioare. Pontica 40, 137–225.

Isvoranu, T., Babeș, M., Constantinescu, E. M. 2010. Tezaurul monetar geto-dacic din așezarea de la Cârlomănești. Studii și Cercetări de Numismatică 1/13, 7–34.

Isvoranu, T., Matei, S., 2018. Un tezaur de monede de tip „călărețul cu cruce" descoperit în județul Buzău, in Munteanu, L., Nicola, C.-D., Talmaţchi, G. M. (eds.), Studia numismatica et archaeologica, in honorem magistri Virgilii Mihailescu-Bîrliba oblata, Ed. Academiei/Ed. „Constantin Matasă", Bucureşti-Piatra-Neamţ, 149–168.

Isvoranu, T., Vîlcu, A., 2010. X. Civilizația geto-dacă „clasică" (prima jumătate a secolului al II-lea a.Chr. până la începutul secolului al II-lea p.Chr.), f. Emisiuni şi circulație monetară, in Petrescu-Dîmboviţa, M., Vulpe, Al. (eds.), Istoria Românilor, I. Moștenirea timpurilor îndepărtate, Ed. Enciclopedică, Bucureşti, 795–805.

Йорданов, К., 2011. Добруджа през I-ото хил.пр.Хр. Гети. История на Добруджа 12, 132–234.

Йорданов, К., 2014. Царството на гетите, in Фол, В., Попов, К. (eds.), Йорда-нов. Царете на траките, ТАНГРА ТанНакРа, София, 115–148.

Лазаренко, И. 2004. Бронзови владетелски монети, отсечени през IV–III в. пр. Хр. в Дионисополис и Одесос. Izvestija Varna 40 (55), 132–173.

Lazarov, L., 2010. The Celtic Tylite State in the Time of Cavarus, in: Vagalinski, L. (ed.), In Search of Celtic Tylis in Thrace (III c. BC). Proceedings of the Interdisciplinary Colloquium arranged by the National Archaeological Institute and Museum at Sofia and the Welsh Department, Aberystwyth University, held at the National Archaeological Institute and Museum, Sofia, 8 May 2010, NOUS Publishers Ltd., Sofia, 97–113.

List of Historical Monuments 2004, MO no. 646 bis/16/07/2004, Order of the Minister of Culture no. 2.314/2004, volume III, Bucharest, 2004.

Манов, М. 2018. Келтски монети от района на Враца. Нумизматика, сфрагистика, епиграфика 14, p. 245–262.

Mihăilescu-Bîrliba, V., 1990. Dacia răsăriteană în secolele VI-I î.e.n. Economie şi monedă. Ed. Junimea, Iaşi.

Mihăilescu-Bîrliba, V., 1993. Les dates numismatiques et la chronologie des sites de type La Tène de la Dacie, in Pavúk, J. (ed.), Actes du XIIe Congrès International des Sciences Préhistoriques et Protohistoriques, Bratislava, 1–7 septembre 1991, 3, Institutul archéologic

de l'Académie Slovaque des Sciences, Bratislava, 1993, 291–296.

Mihăilescu-Bîrliba, V., 1997. Câteva remarci privind cronologia monetăriei geto-dacice, in Isărescu, M. (ed.), 130 de ani de la crearea sistemului monetar românesc modern, Ed. Enciclopedică, Bucureşti, 1997, 71–75.

Mihăilescu-Bîrliba, V., (1998). Circulația monetară din Dacia Răsăriteană și civilizația orășenească timpurie. Cercetări Istorice 17/1, 113–127.

Mihăilescu-Bîrliba, V., 2015. În căutarea celților pierduți. Cercetări privind monetăria celtică și imitativă în România, Bulgaria și R. Moldova în anii 2008-2013, in Croitoru, C., Hânceanu, G. D. (eds.), Miscellanea Historica et Arcaheologica in honorem Vasile Ursachi octogenarii, Ed. Istros, Brăila, 2015, 261–281.

Mitrea, B., 1954. Șantierul arheologic București 1953, a) Un tezaur cu monede dacice descoperit la București de o echipă de muncitori a întreprinderilor Sfatului Popular, in Studii şi referate privind Istoria României, vol. I, Ed. Academiei RPR, Bucureşti, 1954, 290–302.

Moisil, C., 1914. Monete şi tezaure monetare găsite în România şi în Ținuturile românești învecinate (vechiu teritoriu geto-dac). BSNR 11/22, 55–57.

Moisil, C., 1916. Numismatica Dobrogei. Arhiva Dobrogei 1, 112–153.

Mušmov, N., 1911. Kolektivni Nahodki na Moneti. Izvestija. IBAD 2, 281-282.

Oberländer-Târnoveanu, E., 1980. Emisiuni monetare ale geților nord-dobrogeni. Monedele de tip Măcin. Peuce 8, 143–150.

Ocheşeanu, R., 1970. Monedele basileului Moskon aflate în colecțiile Muzeului de arheologie Constanţa. Pontica 3, 125–129.

Paunov, E. I., Prokopov, I. S., 2002. An inventory of roman republican coin hoards and coins from Bulgaria (IRRCH Bulg). Glaux 15. Edizione Ennerre, Milano.

Părpăuţă, T., 2006. Moneda în Dacia Preromană. Secolele IV a.Chr.-I p.Chr. Ed. Trinitas, Iaşi.

Pippidi, D. M., Berciu, D., 1965. Din Istoria Dobrogei, vol. I, Geţi şi greci la Dunărea de Jos din cele mai vechi timpuri până la cucerirea romană. Ed. Academiei RPR, Bucureşti.

Poenaru Bordea, Gh., 1978. Viața economică în Pontul Stâng în epoca elenistică în lumina izvoarelor arheologice şi numismatice. Ph.D. Thesis Summary, Bucureşti.

Preda, C. 1960. Probleme de numismatică geto-dacică. Studii și Cercetări de Numismatică 3, 43–79.

Preda, C., 1964. Monede de un tip necunoscut provenind din Dobrogea. SCIV 15/3, 401–410.

Preda, C., 1971. Monedele getice de tip Vârteju-Bucureşti. Studii și Cercetări de Numismatică 5, 51–79.

Preda, C., 1973. Monedele geto-dacilor. Bucureşti.

Preda, C., 1980. Din numismatica geto-dacică. SCIVA 31/3, 333–342.

Preda, C., 1985. Puncte de vedere referitoare la unele aspecte din numismatica geto-dacică. SCIVA 36/4, 316–331.

Preda, C., 1998. Istoria monedei în Dacia preromană. Ed. Enciclopedică, Bucureşti.

Preda, C., Constantinescu, Gh., 1968. Geţii dintre râul Buzău şi Siretul inferior în lumina descoperirii monetare de la Dumbrăveni. Studii și Cercetări de Numismatică 4, 21–45.

Preda, C., Dragomir, I. T., 1975. Tezaurul de la Răcoasa (jud. Vrancea) şi unele consideraţii asupra monedelor getice de tip Inoteşti. Studii și Cercetări de Numismatică 6, 27–40.

Prokopov, I., 2021. Монетните имитации в Тракия (анализ на монетните съкровища от периода III–I в. пр. Хр.), in Delev, P., Boteva-Boyanova, D., Grozdanova L. (eds.), JUBILAEUS VIII, Back to the Sources, In Memory of the Editors of "Sources for the Ancient History and Geography of Thrace and Macedonia", on the Occasion of the 70th Anniversary from the Publication of the Second Extended Version in 1949, Part 2: Archaeology and Numismatics, Department of Ancient History, Thracian Studies and Medieval History, Faculty of History, St Kliment Ohridski University of Sofia, Sofia, 2021, 207–230.

Prokopov, I., Gushterakliev, R., Dzanev, G., 2007. Coin Collections and Coin Hoards from Bulgaria/ CCCHBulg/Volume I/II, Numismatic Collection of the Historical Museum Lovech (anc. Melta) & Numismatic Collection of the Historical Museum Razgrad (anc. Abritus). Sofia.

Severeanu, G., 1926. Le trésor monétaire d'Inoteşti. BSNR 21/57-58, 7–10.

Șerbănescu, D., 2017. Tezaure monetare din epocă geto-dacică descoperite în județul Călărași. Ed. Istros, Brăila.

Talmațchi, G. 2006. Les monnaies autonomes d'Istros, Callatis et Tomis. Circulation et contexte. Moneta, Wetteren.

Talmațchi, G. 2008. Aspecte ale prezenței monedelor geto-dacice în teritoriul pontic prin prisma noilor descoperiri. Pontica 41, 473–532.

Talmațchi, G., 2023. Un nou tezaur monetar geto-dacic de tip Inotești-Răcoasa descoperit în sud-vestul Dobrogei. Peuce S.N. 21, 259–263.

Vîlcu, A., Neagu, M., 2012. Imitațiile după tetradrahmele macedonene de tip Filip II în lumina tezaurului de la Rasa (IGCH 460). Pontica 45, 603–613.

# The Impact of the Bithynian Provincial Coins on Thracian Mints during the Roman Era

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**Abstract:** The strong historical relationship between Thrace and Bithynia is evident throughout antiquity. In Aegean Thrace, this connection is confirmed through coin circulation and various other forms of material culture, including sculptures and reliefs. While Bithynian coins are relatively scarce and primarily originate from Nicaea, coins from other cities are also found in the region. Their presence is more likely attributed to the movements of traders, craftsmen, and other non-military individuals, as Aegean Thrace was not situated within the limes and the Via Egnatia was not a route commonly used by soldiers, at least during the 1st to the first half of the 3rd century AD. Therefore, this article aims to explore the connection between these two neighbouring regions through the circulation of coins and the shared iconography found in them. Of particular interest is, of course, the adoption of a significant number of iconographic types by Thracian mints, serving as a focal point for our investigation.

**Keywords:** Roman Provincial Coins, Roman Thrace, Pontus-Bithynia, Coin iconography.

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## Introduction

The enduring and close relationship between Bithynia and Thrace has deep roots, stretching back to ancient mythological times. References in the Homeric epics highlight the collaborative efforts of Thracian tribes alongside the Trojans, opposing the Achaeans (Hom. Il. 2. 816–877, esp. 844–847). The shared ancestry of the inhabitants, with Thracian tribes settling on both sides of the Propontis, has served as a cornerstone for maintaining these strong ties. However, the primary catalyst for this long-standing relationship lies in the geostrategic significance of the two regions, acting as a vital bridge between the East and West via various sea and land road axes (**Fig. 1**). Trade and military routes facilitated the movement of goods, people, and ideas, fostering cultural exchange and religious diffusion.[1] Since the second colonisation period, beginning in the 7th century BC, this movement predominantly flowed from east to west. Colonies along the maritime zone of Aegean Thrace were established by Ionian cities, such as Clazomenae, Teos, and Samos/Miletus, further solidifying the symbiotic relationship between colony and metropolis, a dynamic that persisted well into Roman times and notably exemplified

[1] For iconographic interactions on reliefs between Thrace and Bithynia, see Andrianou 2017, 162–164; References related to trade and military routes fostering cultural exchange and religious diffusion is enormous; indicative are Sherk 1988; Alcock 1993; Whittaker 1994; Horden, Purcell 2000; Harris 2005; Van Tilburg 2007; Scheidel 2012; Erdkamp 2013.

by the relationship between Abdera and Teos.[2] In the Roman era, both Bithynia and Thrace developed more or less along the same course, and the common point is the city of Byzantium, which changed provinces.[3] Upon closer inspection, one could highlight that, apart from the fact that in Thrace active mints were always less in number —especially during the 1st century — urbanisation of the province was also delayed. Furthermore, while the number of active mints in Bithynia increased steadily from the 1st to the 3rd centuries, in Thrace there was a decline during the Flavian dynasty.

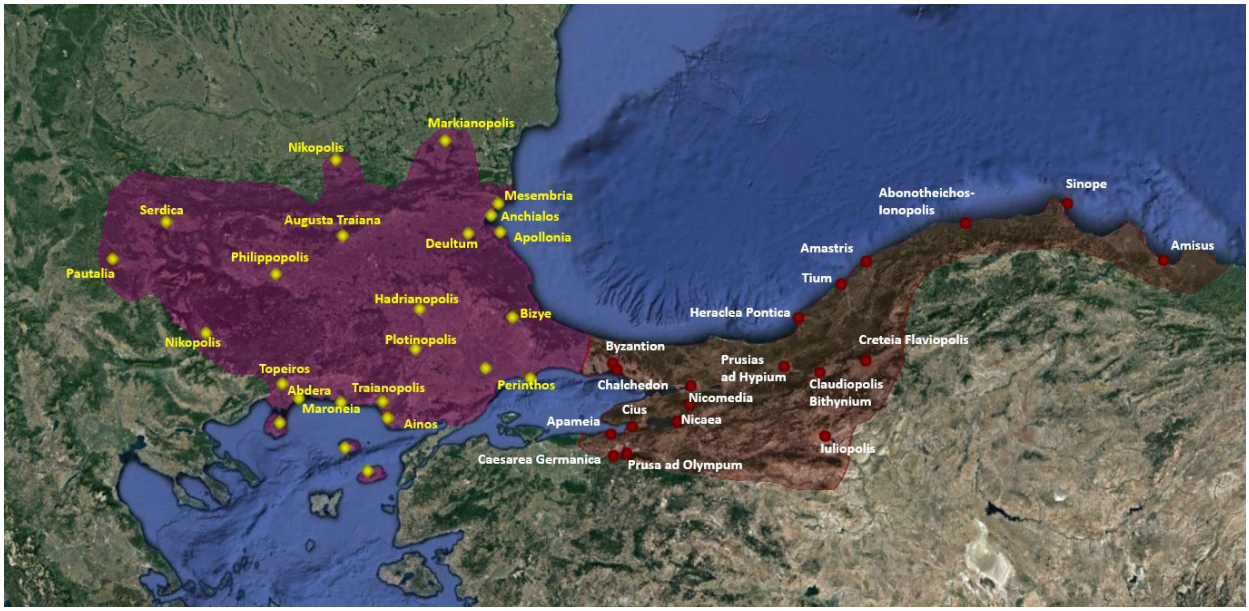


**Fig. 1.** Map of the Roman provinces of Thrace and Bithynia-Pontus.

One of the most crucial pieces of evidence showcasing the interactions between the two regions is the coinage minted by the cities. Indeed, their circulation beyond the borders of their issuing authorities indicates contacts and movements of people, suggesting a significant level of connection between them, even if systematic commercial relations are not explicitly documented. Thus, through this paper that was presented as part of a panel dedicated to tracing the presence of Bithynian coins in Europe, my intent is to understand the factors behind their distribution.

As the purpose of the panel was first to trace Bithynian coins in Europe and to understand the reasons for their presence, generally speaking, it can be argued that only a very limited number have been traced. While only a limited number of Bithynian coins have been identified, it is noteworthy that beyond coin circulation, certain iconographic types also traverse regions. These types, originating in Bithynia and Asia Minor, are later reproduced by Thracian mints. As such, this article delves into the connection between these two neighbouring areas through an analysis of coin circulation and shared iconography. The primary focus lies on the adoption of a significant number of iconographic types by Thracian mints, which presents a compelling aspect for our investigation.

[2] For Abdera and its mother city Teos, see Graham 1992; Moustaka et al. 2004, and especially the paper of Loukopoulou, Parissaki 2004, 305–310; Chryssanthaki-Nagle 2007, 27–30.
[3] Byzantion until the era of Septimius Severus belonged to the province of Bithynia-Pontus; see Tasaklaki 2020, 22–23, esp. n. 91.

## Bithynian coins in Aegean Thrace

In Aegean Thrace, a region defined by the Rivers Nestos to west and Hebros to the east and the Rhodope Mountains to the north, almost all of the Bithynian coins originate from Nicaea (**Table 1, Fig. 2**). To be more specific and moving from west to east, three coins of Nicaea under Marcus Aurelius (Serapis),[4] Commodus (Demeter),[5] and Alexander Severus (military standards)[6] have been discovered in Abdera and its *chora*. Going further to the east, two additional coins from Nicaea (possibly of Alexander Severus with military standards) have been found in Maroneia,[7] with one being located close to the port. Two more coins of Nicaea depicting Lucius Verus (Nike) and Julia Domna (Tyche) on the obverse along with one from Nicomedia featuring Septimius Severus on the obverse and Hercules on the reverse, were delivered by citizens to the Ephorate of Antiquities of Rhodope.[8] These coins are believed to have originated from areas near the Via Egnatia. No coins of Bithynia have been discovered in Zone, Molyvoti — often identified as the ancient colony of Thasos — Stryme, and Dikaia, which are all ancient city-states that were abandoned during the Hellenistic period and later reinhabited during the Roman era due to the presence of natural harbours.[9]

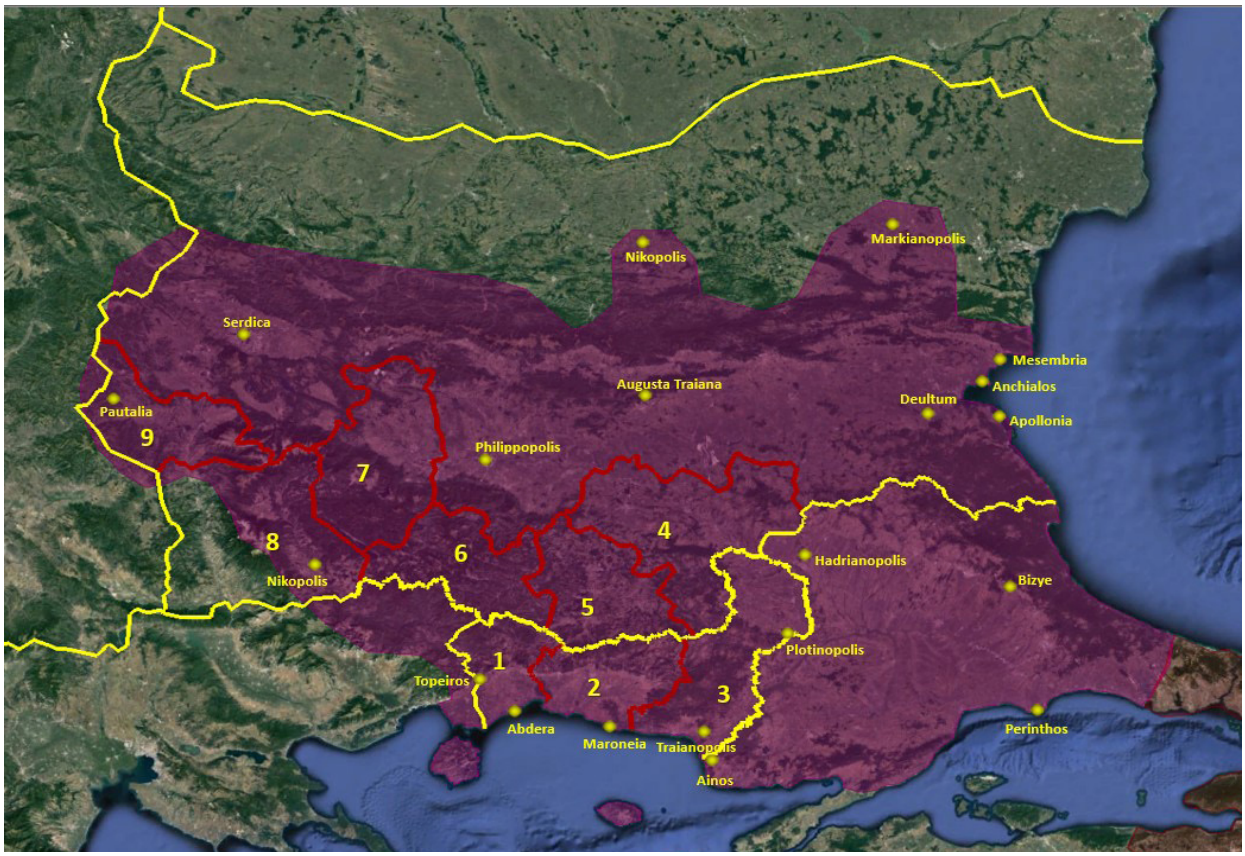


**Fig. 2.** Map of the Roman province of Thrace and modern administrative borders.

[4] For the type, see RPC online IV.1 5519, 10008.
[5] For the type, see RPC online IV.1 6004.
[6] For the type, see RPC VI 30165.
[7] Coins are corroded and can only with reservations be attributed to Alexander Severus, bearing on the reverse *aquila* between two military standards. For the type, see RPC VI 30165. For the coins found in the city of Hellenistic and Classical Maroneia, see Psoma et al. 2008.
[8] Nicaea: RPC online IV.1 5542 (Lucius Verus); Classical Numismatic Group, Auction 226, 27.01.2010, 226 (Julia Domna); Nicomedia: Classical Numismatic Group, electronic Auction 278, 25.04.2012,199 (Septimius Severus).
[9] For coins found at Zone, see Tasaklaki forthcoming.

The pattern observed in Aegean Thrace finds a similar reflection in southern and southwestern Bulgaria as well (**Table 1, Fig. 2**). For instance, in the Haskovo district (**Fig. 2. 5**), situated just north of the Rhodope Mountains, records from the publication of 'Coin Collections and Coin Hoards from Bulgaria' indicate an absence of Bithynian coins.[10] In Smolyan (**Fig. 2. 6**), only one coin of Nicomedia during the reign of Alexander Severus has been documented in the relevant CCCHBulg.[11] Moving to Blagoevgrad (**Fig. 2. 8**), two coins of Nicaea and Creteia Flaviopolis under Septimius Severus, along with one of Alexander Severus have been found.[12] The comprehensive view we obtain west of the Via Diagonalis/Militaris indicates a notable absence of Bithynian coins prior to the Severan dynasty. It is only from the period of Alexander Severus (AD 222–235) onwards that coins from Nicaea begin to emerge, albeit in isolated instances, across the entire province, including the southwestern regions situated far from the Via Diagonalis/Militaris.

| Xanthe (Abdera) district (3 specimens) | |
|---|---|
| | Nicaea |
| Marcus Aurelius | 1 |
| Commodus | 1 |
| Alexander Severus | 1 |

| Rhodope district (5 specimens) | | |
|---|---|---|
| | Nicaea | Nicomedia |
| Lucius Verus | 1 | |
| Septimius Severus | 1 | 1 |
| Alexander Severus | 2 | |

| Smolyan district (1 specimens) | |
|---|---|
| | Nicomedia |
| Alexander Severus | 1 |

| Blagoevgrad district (3 specimens) | | |
|---|---|---|
| | Nicaea | Creteia Flaviopolis |
| Septimius Severus | 1 | 1 |
| Alexander Severus | 1 | |

| Pazardzik district (7 specimens) | | | |
|---|---|---|---|
| | Nicaea | Byzantion | Chalkedon |
| Caracalla | 1 | 1 | |
| Elagabal | 1 | | |
| Alexander Severus | 1 | | 1 |
| Julia Mamaea | 1 | | |
| Gordian III | 1 | | |

| Kystendil district (9 specimens) | |
|---|---|
| | Nicaea |
| Commodus | 1 |
| Caracalla | 1 |
| Alexander Severus | 4 |
| Gordian III | 3 |

| Serdica district (10 specimens) | |
|---|---|
| | Nicaea |
| Alexander Severus | 1 |

**Table 1.** Distribution of Bithynian coin in the Roman province of Thrace.

It may be also beneficial to examine the dispersion of Bithynian coins in Thrace from a different perspective, focusing on their distribution over time from the Classical to the Roman periods. Once again, only isolated issues have been identified in Aegean Thrace. Relying solely on this evidence, it is difficult to substantiate the existence of strong relationships between those two regions. In Abdera there is one silver coin of Chalcedon, one of Prusias II, and one of Mithridates Eupator (Chryssanthaki 2004, 822–823, nr. 185-187). In Zone, although the city was restricted in a walled area, there is a coin of Prusias II, while in Molyvoti, one coin of Nicomedes I has been

[10] For the coins in the regional museum at Haskovo, see CCCHBulg VII.
[11] For the coins in the regional museum at Smolyan, see CCCHBulg III.
[12] For the coins in the regional museum at Blagoevgrad, see CCCHBulg IV.

found.[13] Additionally, a limited number of coin hoards were found in the area.[14] It is worth noting that no such coins have been discovered in the southwestern part of Bulgaria.

At this juncture, expanding the scope of comparative analysis to other fields is necessary. It reveals a sustained and multifaceted relationship. Throughout the 1st century AD, evidence of interactions is evident in two main domains: coin iconography and relief iconography. With regard to the reliefs that have been discovered in Aegean Thrace and in the Roman province of Thrace as a whole, Dimitra Andrianou already identifies influences originating from the regions of Kyzikos, Byzantium, and the broader area of Pontus (Andrianou 2017, 166–167). Reliefs depicting funerary banquets are mainly of Kyzikian tradition, and they are in demand especially when combined with the rider in the *Stockwerkstele* from Maximianoupolis, now at the Archaeological Museum of Komotini. Of course, this might be explained by the presence of itinerant stone carvers who worked in the area when expansion projects were ongoing in the new province. This is probably more obvious in cities like Perinthos, Serdica, or Philippopolis — especially the latter, which was the metropolis of the *koinon* of Thrace. Even from the era of Domitian, its extremely large construction projects show a propensity toward the repertoire known from cities like Nicaea, Nicomedia, Kyzikos etc. To this, elements like the *onomasticon* and the creation of sylloges can be added to confirm immigration of people in both areas (Dana 2014; Giannakopoulos 2016).

**Fig. 3.** Coins of the imperial mints of Thrace or Bithynia; adopted iconographic types by Thracian and Bithynian mints.

## Iconographic Interaction between Bithynia and Thrace

In Roman imperial coins, there exists a series of sesterces that have divided scholars over the mint attribution due to similarities with issues from both Thracian and Bithynian cities. It consists of issues from the time of Domitian dated between AD 80–82 (**Fig. 3**). The depiction of the emperor, with its muscular neck and strong facial features, is distinctive and points to a singular engraver. The majority of scholars tend to attribute that imperial mint to the Thracian territory based on the fact that they have been found in areas of modern Bulgaria and Serbia.

[13] For Zone, see Tasaklaki forthcoming, while for Molyvoti, see Psoma et al. 2008, 41 nr. PM155.
[14] For coin hoards, see IGCH 723 (Thasos, Byzantion, Chalkedon, 340–335 BC), IGCH 724 (Byzantion, Chalkedon, Cius, 340–335 BC), IGCH 725 (Byzantion, 340–335 BC), IGCH 867 (Byzantion, Chalkedon, Cius, 220–200 BC), IGCH 971 (Maroneia, Thasos, Lysimachos, Prusias II, Nicomedes II, Abydus, Alexandreia Troas, 85 BC).

Moreover, issues of Philippopolis and Perinthos are just as stylistically similar in the engraving of the emperor's portraits with very muscular necks, large figures on the reverse, and very crowded letters in inscriptions. In favor of this attribution, namely a Thracian mint (preferably Perinthos), the editors of RPC II found this group of 'Roman-style' coins quite problematic:

> "Although the case was not accepted by Carradice, CFRD, who preferred to see them as unusual products of Rome, the evidence for their minting elsewhere is quite strong. In this catalogue they are attributed to a mint in Thrace, perhaps even Perinthos. The coins seem to have circulated principally in Thrace, to judge from their presence in the museums at Belgrade, Sofia and Istanbul, but some are also reported as coming from Turkey" (RPC II 13, 87–91).

Recently, Barbara Zając, a scholar who worked on Bithynian coins under Hadrian, refers in her book and in an article to that specific group and the reflection of their iconography to local issues. She is also in favour of the Thracian mint but also highlights the great extent of their adoption by Bithynian mints like Nicaea, Nicomedia, Prusias ad Hypium, and Juliopolis (Zając 2019, 132 ff., esp. table 1; Zając 2021, 118–124). The impact is strong enough that during the reign of Trajan almost all iconographic types reappear.

The second, even more problematic 'Roman-style' issue is that of sestertii, dupondii, and asses, which follow the weights and metals in use at Rome and date to AD 80–82 and include coins for Titus and Domitian, as well as some 'restored' coinages.

However, considering that Bithynia-Pontus was already more advanced in terms of infrastructure and urbanisation — with this province not only maintaining its urban centres but also continuing to grow, albeit modestly, and supporting ten active mints — it is difficult to insist that significant developments occurred in Thrace. At the same time, in Nicomedia, the capital of the province of Bithynia-Pontus, new trends emerged alongside marble mining and processing, including the establishment of a sculptor school. In Thrace on the other hand, where there were only just a few cities in the hinterland and six active mints with limited issues (Tasaklaki 2021, 376–382, tab. 2) — among them the capital of the province, Perinthos, and the metropolis of the Koinon, Philippopolis — only two of the known iconographic types were repeated.

| | Thrace | | | Bithynia | | |
|---|---|---|---|---|---|---|
| **Artemis** Phosphorus | Perinthos | Plotinopolis | Bizye | Byzantion | Prusa | Cius |
| **Apollo** tripod | Plotinopolis | Hadrianopolis | | Amisos | | |
| **Apollo** ¾ from behind | Plotinopolis<br>Serdica | Philippopolis | Hadrianopolis | Nicaea | Nicomedia | |
| **Asclepius** on serpent | Pautalia | | | Nicaea | | |
| **Athena** feeding serpent | Topeiros<br>Serdica | Pautalia | Philippopolis | Nicaea | Nicomedia | |
| **Demeter** on biga with serpent | Plotinopolis | Hadrianopolis | | Nicaea | | |
| **Dionysos** on panther | Plotinopolis<br>Bizye | Pautalia<br>Augusta Traiana | Hadrianopolis<br>Philippopolis | Tium | Nicaea | |
| **Griffin** | Philippopolis | | | Nicaea | | |
| **Hercules** on rock | Topeiros | | | | Amastris | |
| **Triptolemus** | Hadrianopolis | | | Nicaea | | |

**Table 2.** Common iconographic types between the Roman provinces of Thrace and Bithynia-Pontus.

To gain a clearer understanding of the developments at the end of the 1st century, it is instructive to examine the numismatic production and iconography of the subsequent period. In the first half of the 2nd century AD, stylistic similarities with coins from Bithynia-Pontus and Asia Minor

indicate continued interaction between these regions, particularly during the reign of Antoninus Pius. From that time onwards, with the sudden activation of 13 mints in Thrace — five of which were new (Tasaklaki 2021, 375, tab. 1) — certain iconographic types first appeared in cities such as Nicaea, Nicomedia, Amisos, and Amastris or other cities of Asia Minor before being adopted by Thracian mints (**Table 2**).

Starting with the pseudo-autonomous coins of Philippopolis under Antoninus Pius, in terms of iconography and topics, they point to Roman *quadrantes*, a denomination that became more common in the late 1st century BC but whose production declined in the later periods.[15] During the time of Antoninus Pius they were already sporadically produced, and it was also the time when pseudo-autonomous issues started to appear. In both groups the repertoire was gods or goddesses on the obverse and their symbol on the reverse. For the iconography of the pseudo-autonomous coins of Thracian mints, it now seems more clear that types came from Asia Minor to Thrace through Nicaea and Nicomedia, where those like the seated griffin placing its forepaw on a wheel were already depicted.[16] Moreover, Demeter on a biga of winged serpents appears on the reverse of Plotinopolis under Antoninus Pius and Hadrianopolis under Gordian III (Tasaklaki 2020, 152–153; Tasaklaki 2025). It appears more systematically on Nicomedia's and Nicaea's coins from the rules of Domitian and Antoninus Pius, respectively.[17] In Asia, several cities used the type. The widespread of the Demeter and Persephone types in Sardis and its region, according to Lindner (Lindner 1994, 131; de Hoz 2016, 192–94), could correlate to an imperial panegyric iconographic formula or to the iconography of a local myth in the self-representation of the city. Moreover, the probability that the Orphic hymns were formed in the region of Asia Minor — more specifically in Pergamon — reinforces the correlation. The iconography is naturally associated with the revival or recreation of festivals, such as the *Chrysanthina,* which is thought to have begun in the mid-2nd century and is definitely connected with the second sophistic and the school at Sardis (Evans 2017, 13).

In terms of coin iconography, winged serpents were first related with Demeter and Triptolemos and derive from the myth where Demeter gives a chariot to Triptolemos so that he could sow wheat throughout the earth, while the first examples were traced again in Bithynian mints.[18] Next to them, another deity can be added. Asclepius first appeared on the reverse of coins of Pautalia under Lucius Verus.[19] This is probably the only iconographic type until now that seems to be first depicted in Thrace and then in Bithynia, since in Nicaea, Asclepius appears with Caracalla's bust on the obverse and later with Alexander Severus.[20] However, we should reserve the possibility that a coin from the Antonine period may be discovered in a Bithynian mint in the future.

Similar is the depiction of the seated Athena with helmet and shield feeding a serpent. The type appears for the first time in Nicaea under Marcus Aurelius.[21] A variation of this iconography is Athena standing and feeding a serpent. It is again found in Plotinopolis under Antoninus Pius and Serdica under the Severans, while examples from the cities in Bithynia are earlier.[22] However, the most prevalent type is that of Apollo carrying a laurel wreath and seen from behind in three-quarters view walking towards the right (Tasaklaki 2020, 144–145). In Thrace, the earliest

[15] The main characteristic of the *quadrantes* is, due to its small size, the absence of the imperial portrait on the obverse, just like the category of pseudo-autonomous issues. For pseudo-autonomous issues of Thrace, see Peter 2017; Tasaklaki 2021.
[16] Nicaea: RPC online IV.1 3089 (Marcus Aurelius), 5900 (Antoninus Pius), 11775 (Commodus).
[17] Nicomedia: RPC II, 656 (under Domitian); Nicaea: RPC online IV.1 5487 (under Antoninus Pius), 5916 (under Marcus Aurelius).
[18] Nicaea: RPC online IV.1 5518 (under Marcus Aurelius), IV.1 5121 (under Commodus);
[19] RPC online IV.1 8838 (under Lucius Verus).
[20] Alexander Severus RPC VI 3156; see also Grozdanova 2018, 190, n. 2; Grozdanova 2025.
[21] RPC online IV.1 11768 (under Marcus Aurelius). For Thrace, see Tasaklaki 2020, 308 nr. T115 (Topeiros under Caracalla); Gorny & Mosch, Auction 126, 14.10.2003, 1692 (Pautalia); Classical Numismatic Group, Auction 88, 14.09.2011, 783 (Serdica).
[22] For Thrace, see Tasaklaki 2020, 142–143 nr. Π54–56 (Plotinopolis, under Antoninus Pius); Varbanov III 2012 (Serdica).

example of this type comes from Plotinopolis and bears resemblance to a coin from Nicomedia depicting Hermes holding a caduceus instead.

As one can observe, a common element among all these iconographic types is the serpent. Whether depicted instead of horses in a chariot or in connection with Triptolemos or Athena or Asclepius, the serpent holds significant symbolism. This imagery is intricately linked to Demeter and her mythological quest to find her daughter, Persephone, who was in the Underworld, Hades' kingdom. The serpent represents a chthonic perspective, emphasising themes of the earth, fertility, and the afterlife. This chthonic symbolism is powerfully conveyed through the depictions of serpents on the coins, illustrating a deeper mythological and cultural narrative.

In concluding this paper, some thoughts and preliminary conclusions regarding the potential reasons for the dissemination of coin types from Bithynia or Asia to Thrace should be briefly presented. With the onset of mass coin production by most cities in Thrace in the mid-2nd century AD, there emerged an immediate need for new iconographic types (Tasaklaki 2021). Until the time of Trajan, issuing authorities were limited, and the iconography, with the exception of Abdera, was largely derived from the city's religious heritage, as observed in Perinthos and Maroneia. Philippopolis, having no prior tradition of coinage, tended to adopt Roman types. Under Hadrian, four new mints became active, and during the reigns of Antoninus Pius and Marcus Aurelius, a total of six new mints were established, with only sporadic cases thereafter. Consequently, the challenge for local magistrates and engravers lay in sourcing models and inspiration, which were found either in the imperial mint of Rome or in nearby cities with an established numismatic tradition.

| Bithynian immigrants in Thrace | | | |
|---|---|---|---|
| Thasos | τὸν κόσμον πρῳθ[έων] **Νεικομηδέων** ὁ π[— — —] /Ἑρμόδωρος κῖμε τῆλ[ε] Θάσου σκοπιαῖς | SEG 27: 555 | Roman Imperial |
| Topeiros | Αὐρ(ηλία) Καλλιόπη ἰδίῳ συμβίῳ Κασσίῳ Ἀχιλλεῖ **σειτευτῇ Νεικαεῖ** τὸ μνημεῖον ἐποίει· ὃςδ' ἂν ἕτερον πτῶμα ἐνθάδε θήσει, δώσει τῇ πόλει | IThrAeg E89 | 3rd c. AD |
| Nikopolis ad Istrum | ἀγαθῇι τύχῃ. Διὶ Ὀλυνπίῳ κα[ὶ] Ἥρᾳ Ζυγείᾳ Δι(—) Κλαύδειεις Κλαύδεις **Νεικαεὺς** ὑμνῳδοῖς ἱερο-νείκα<ι>ς καὶ φιλοσε-βάστοις ἐκ τῶν ἰδίων ἀνέστησ<α>ι | IGBulg II 668 | |
| Nikopolis ad Istrum | ἀγαθῇι τύχηι. Διὶ Ὀλυμπίωι καὶ Ἥραι Ζυγίᾳ καὶ Ἀθηνᾷ Πολιάδι Λουκᾶς Ζένωνος **Νεικαιεὺς** καὶ **Νεικοπολείτης** ὑμνῳδοῖς φιλοσεβάστοις τὸν βωμὸν ἐκ τῶν ἰδίων ἀνέθηκεν. | IGBulg II 667 | |
| Nikopolis ad Istrum | ἀγαθῇι τύχη[ι] θεῷ Ἡρακλεῖ Μάξιμος [...]-σίου κὲ Νεί[κων] Θεοδώρο[υ ὑ]πὲ[ρ] τῆς συνόδου **Νεικομηδέων λιθοξόων** τὸν βωμὸν χαρι[σ]στήριον | IGBulg II 674 | |
| Nikopolis ad Istrum | Θ(εοῖς) Κ(αταχθονίοις). Γάιος Βιάνορος **Νεικαεὺς δομοτέκτων** πολείτης φυλῆς Καπιτωλείνης, ζήσας καλῶς ἔτη ἑβδομήκοντα, ζῶν κὲ φρο-[νῶν κατεσκεύασεν]. | IGBulg II 690 | |
| Philippopolis | ἡ βουλὴ καὶ ὁ δῆμος. **Νεικαεῖς** ὁλυμπιασταί. **Νεικομηδεῖς. ροποπῶλαι. βυρσεῖς.** Φίλιππος Φιλίππου τῷ υἱῶι καὶ Παπιας Φιλίππου τῷ ἀδελ-Φιλίππου τῷ ἀδελ-ἔτη · λ · μνήμης χάριν | IGBulg V 5464 | |
| Philippopolis | Χρυσίππῳ Ἡδύλου **Νεικαιεῖ** ζήσαντι ἔτη λε' Ἡδύλος καὶ Απφους καὶ Χρῆστος ἀδελφῷ μνήμης χάριν | IGBulg III.1 1521 | |
| Serdica | **Διλλης** Τυράννου **Νεικαιεὺς** ζήσας ἔτη τριάκοντα ἐνθάδε κεῖται τειμηθεὶς ὑπὸ Καλπουρνίας μνήμης χάριν | IGBulg IV 1955 | |
| Serdica | Ἀριστοκρά[τ]ης Ἀριστοκράτους **Νεικαεὺς** ζήσας ἔτη ξε' | IGBulg IV 1956 | |
| Varna | Ὁλόκαλος Ποντικοῦ γένι **Ἀμαστριανὸς** βιώσας ἐνθάδε[κεῖμαι {[27]κεῖται} | IGBulg V 5068 | |

**Table 3.** Bithynian immigrants in Thrace.

In the provinces of Bithynia-Pontus and Asia, the necessary infrastructure for minting had been established since the early 1st century AD, including local mints and an imperial mint in Nicaea under Claudius and Nero (Bekker-Nielsen 2008, 41, 147–163). These regions had also developed a rich iconographic tradition, fostered by their renowned schools of sculpture. This led to the movement and migration of people towards Thrace, particularly craftsmen (Delchev, Raycheva 2018).[23] This phenomenon intensified in the 2nd century AD due to the foundation of new cities, which necessitated extensive construction and expansion works. The presence of associations of Bithynians in Thrace and vice versa attests to the migration of marble craftsmen and sculptors from Kyzikos, Nicaea, and other regions of Asia Minor such as Cappadocia. For instance, *Lucius Crispus Epagathos*, *torneutis*, was awarded citizenship for his contributions to Philippopolis (**Table 3**).[24] Additionally, traders like Achilles of Nicaea, a *siteutis*, and his wife lived in Topeiros, while

[23] The topic has been intensively discussed already back in the 1970s by Prof. Margarita Tacheva: see e.g. Tatscheva 1970; Tatscheva 1972; Tatcheva 1978 (the different spelling of the family name is due to the different languages of the publications).

[24] SEG 52:708: Λούκιος Κρειϲ-| πεῖνος Ἐπάγα-|θος τορνευ-| τὴς Καππάδοξ. See Sharankov, Cherneva-Tilkiyan 2002, 54-55.

Philippos from Nicomedia, a *ropopoles* or small-ware merchant, resided in Philippopolis.[25]

We must also consider that trade routes by land and sea facilitated communication from Ionia to the north, even for Attic products. African slip ware or Chandarli ware from Pitane dominated in Aegean Thrace throughout the three centuries, indicating a persistence of close relations dating back to the era of colonisation. Similar, shared religious cults, such as that of Artemis Phosphorus around Propontis, likely influenced the adoption of specific iconographic types.

What initially began in the first century AD as indicative connections evolved into more formal relationships, exemplified by agreements like the Homonoia between Perinthos and Nicomedia under Gordian III.[26] During this time, soldiers passed through Thrace without establishing permanent residence, as their main goal was to reach and bolster Roman forces at the frontier. It is evident that the Via Egnatia was not used by soldiers during this period, extending until the mid-third century. Instead, traders and artisans traversed the area, carrying with them iconographic motifs, people, and ideas that followed these routes.

**Bibliography**

Alcock, S. E., 1993. Graecia Capta: The Landscapes of Roman Greece. Cambridge.

Andrianou, D., 2017. Memories in Stone. Figured Grave Reliefs from Aegean Thrace, ΜΕΛΕΤΗΜΑΤΑ 75. Athens.

Bekker-Nielsen, T., 2008. Urban Life and Roman Politics in Roman Bithynia: The Small World of Dio Chrysostom. Aarhus.

Chryssanthaki-Nagle, K., 2004. L'Histoire monétaire d'Abdère du Vie avant J.-C. au IIe siecle après J.-C. Paris. Unpublished Dissertation, Paris IV-Sorbonne Université.

Chryssanthaki-Nagle, K., 2007. L'Histoire monétaire d'Abdère en Thrace (VIes. av. J.-C. – IIe s. ap. J.-C.), ΜΕΛΕΤΗΜΑΤΑ 51. Athènes.

CCCHBulg II: Filipova, S., Prokopov, I., Paunov, E., 2009. The Numismatic Collection of the Regional Historical Museum at Kyustendil (Ancient Ulpia Pautalia, Part 1. Coin Collections and Coin Hoards from Bulgaria II. Sofia.

CCCHBulg III: Filipova, S., Paunov, E., Boyadjiev, N., Tenchova, A., Prokopov, I., 2011. The Numismatic Collection of the Regional Historical Museum at Smolyan (Central Rhodopes). Coin Collections and Coin Hoards from Bulgaria III. Sofia.

CCCHBulg IV: Andonova, M., Filipova, S., Paunov, E., Prokopov, I., 2014. The Numismatic Collection of the Regional Historical Museum at Blagoevgrad (Ancient Skaptopara). Coin Collections and Coin Hoards from Bulgaria IV. Sofia.

CCCHBulg V: Ignatova, S., Filipova, S., Tenchova, A., Prokopov, I., 2015. The Numismatic Collection of the Regional Historical Museum at Pazardzhik. Coin Collections and Coin Hoards from Bulgaria V. Sofia– Pazardzhik.

CCCHBulg VI: Ignatova, S., Filipova, S., Tenchova, A., Prokopov, I., 2016. The Numismatic Collection of the Regional Historical Museum at Sandanski (ancient Medius-Particopolis), Petrich (ancient Heraclea Sintica/strimonica) and Gotse Delchev (ancient Nikopolis ad Nestum). Coin Collections and Coin Hoards from Bulgaria VI. Sofia.

CCCHBulg VII: Slavova, M., Prokopov. I., 2017. The Numismatic Collection of the Regional Historical Museum at Haskovo. Coin Collections and Coin Hoards from Bulgaria VII. Sofia-Haskovo.

Dana, D., 2014. Onomasticon Thracicum. Répertoire des noms indigènes de Thrace, Macédoine orientale, Mésies, Dacie et Bithynie, MELETEMATA 70. Athènes.

de Hoz, M.-P., 2016. The Goddess of Sardis: Artemis, Demeter or Kore?, in: de Hoz, M.-P., Hernández,

[25] IThrAeg E 89 (inscription found in the *chora* of Topeiros); IGBulg V 5464 (Philippopolis).
[26] For Homonoia coins, see Classical Numismatic Group, Triton XV, 03.01.2012, 1380 (under Gordian III); Teutoburger MünzauktionA100, 25.02.2016, 1754.

J.P.S., Valero C.M. (eds.), Between Tarhuntas and Zeus Polieus: Cultural Crossroads in the Temples and Cults of Graeco-Roman Anatolia, Colloquia antiqua 17, 185-224.

Delcev, D., Raycheva, M., The Lesicheri Pillar and the Transfer of Funerary Architecture Trends from Bithynia to Roman Thrace, in: Vagalinski, L., Boteva, D., Raycheva, M., Sharankov, N., (eds.), Cities, Territories and Identities, 1st International Roman and Late Antique Thrace Conference, 7-10 October 2016, Plovdiv. Bulletin of the National Archaeological Institute 44. Sofia, 2018, 245-258.

Doğanci, K., 2013.The oldest peoples of Bithynia: Tribes of Thracian origin, in: The Balkans—Languages, History, Cultures, Vol. III, 3rd International Conference, 14–15 October 2011, 45–51. Veliko Tarnovo.

Erdkamp, P., 2013. A Companion to the Roman Army. Malden.

Evans, J. DeRose, 2017. Cultural Memory, Artemis and "Kore": The Coins of Sardis during the Second Sophistic, Numismatica e antichitàclassiche 46, 133–153.

Giannakopoulos, N., 2016. Groups and Associations in Bithynia and Pontus: Interaction with prominent Statesmen and provincial Governors, in: Y. Yonetmeni, M. Ceysakar (eds.), Virdoctus Anatolicus, Studies in Memory of Sencer Sahin, 364–387. Istanbul.

Graham, A.J. 1992. Abdera and Teos, Journal of Hellenic Studies 112, 44–73.

Grozdanova, L. 2018. Searching for Identities in the Coinage of Pautalia, in: Proceedings of the First RaLATh Conference "Cities, Territories and Identities" (Plovdiv, 2016) Edited by L. Vagalinksi, M. Raycheva, D. Boteva, N. Sharankov (= Bulletin of the National Archaeological Institute, vol. 44). Sofia, 187-194.

Grozdanova, L. 2025. Transfer of Iconographic Concepts: Specific Coin Type with Asclepius in Pautalia and Nicaea Coinage, in: Vojvoda, M., Miškec, A., Grabež, G. (eds.) DE VETERE PECUNIA DE VETERE PECUNIA. Scripta in honorem Bojana Borić-Brešković. Belgrade, 235-244.

Harris, W.V., 2005. Rethinking the Mediterranean. Oxford.

Horden, P., Purcell, N. 2000. The Corrupting Sea: A Study of Mediterranean History. Oxford.

IGBulg: G. Mihailov, Inscriptiones Graecae Bulgariae, I2–V, Serdicae 1958–1997.

IGCH: Thompson, M., Mørkholm, O., Kraay, C.M. 1973, An Inventory of Greek Coin Hoards. American Numismatic Society, New York, 1973.

IThrAeg: Λουκοπούλου, Λ., Ζουρνατζῆ, Α., Παρισάκη, Μ.-Γ., Ψωμᾶ, Σ., Ἐπιγραφὲς τῆς Θράκης τοῦ Αἰγαίου μεταξὺ τῶν ποταμῶν Νέστου καὶ Ἕβρου (Νομοὶ Ξάνθης, Ροδόπης καὶ Ἕβρου). Ἀθῆναι 2005.

Lindner, R., 1994. Mythos und Identität: Studien zur Selbstdarstellung kleinasiatischer Städte in der römischen Kaiserzeit. Stuttgart.

Loukopoulou, L., Parissaki, M.-G., 2004. Teos and Abdera: The epigraphic evidence, in: Moustaka, A., Skarlatidou, E., Tzannes, M.-C., Ersoy, Y. (eds.), Klazomenai, Teos, and Abdera: Metropoleis and Colony, Proceedings of the International Symposium held at the Archaeological Museum of Abdera, Abdera 20–21 October 2001, Thessaloniki, 305–310.

Moustaka, A., Skarlatidou, E., Tzannes, M.-C., Ersoy, Y. (eds.), 2004. Klazomenai, Teos, and Abdera: Metropoleis and Colony, Proceedings of the International Symposium held at the Archaeological Museum of Abdera, Abdera 20–21 October 2001, Thessaloniki, 311–318.

Pitt, E.M., 2016. Cities on the Periphery: Urbanization in Bithynia, Pontus, and Paphlagonia under the Roman Empire. Berkeley. Unpublished Dissertation, University of California.

Sharankov, N., Cherneva-Tilkiyan, S. 2002. The Life of Ancient Philippopolis in Lucian's Dialogue "Runaways", in: Archaeologia Bulgarica 6/3, 45-62.

Scheidel, W., 2012. The Cambridge Companion to the Roman Economy: Cambridge University Press: Cambridge.

Sherk, R. K., 1988. The Roman Empire: Augustus to Hadrian. Cambridge University Press:

Cambridge.

Τασακλάκη, Μ., 2020. Η νομισματοκοπία των πόλεων της Πλωτινοπόλεως και της Τοπείρου. Συμβολή στην ιστορία της ρωμαϊκής επαρχίας της Θράκης. Corfu. Unpublished Dissertation, Ionian University.

Tasaklaki, M., 2021. Capitals vs mints in the framework of the Roman provincial monetary policy. The case of Thrace, in: Raycheva, M., Steskal, M. (eds.), Roman Provincial Capitals under Transition, Proceedings of the International Conference Held in Plovdiv 4–7, November 2019, OAW 61, Wien, 373–394.

Tasaklaki, M. 2025. Iconographic Interactions between the Roman Provinces of Thrace, Pontus Bithynia, and Asia Minor, in: Proceedings of the XVI International Numismatic Congress, 11–16.09.2022, Warsaw, Vol. II, Roman Numismatics. Brepols Online, 367-378. https://doi.org/10.1484/M.WSA-EB.5.145117.

Tasaklaki, M., (forthcoming). The foreign coins found at Zone. Zone IVb.

Tatscheva, M. 1970. Kleinasiaten und Syrer in Nicopolis ad Istrum (II – III Jh.), in: Actes du Premier Congrès international des études balkaniques et Sud-Est Européennes, 2. Sofia, 115–123.

Tatscheva, M. 1972. Handverkehr und Kaufleute aus dem griechischen Osten in Thrakien. – In: Acta Conventus "Eirene" 11. Wratislaviae, 87–89.

Tatcheva, M. 1978. Population et onomastique d'Asie Mineure en Mésie Inférieure. – Pulpudeva 2, 81–88.

Van Tilburg, Ch., 2007. Traffic and Congestion in the Roman Empire: Routledge, London.

Whittaker, C. R., 1994. Frontiers of the Roman Empire: A Social and Economic Study: Johns Hopkins University Press, Baltimore.

Zając, B., 2019. The Roman Imperial Coinage Model for some Provincial Coins of Bithynia and Pontus Struck During the Reign of Trajan (98–117), Notae Numismaticae 14, 123–142.

# Coin Finds from Blaundos, Lydia

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**Abstract:** Blaundos is a Lydian city which is located approximately 2 km northeast of Sülümenli village, 30 km south of Uşak. It was founded on the top and slopes of a peninsula surrounded by a deep canyon on three sides. It was colonised by Macedonians in the early Hellenistic period, probably by those in the Seleucid army, which dominated this region for about 100 years between c. 281 and 188 BC. After the peace of Apameia in 188 BC, Blaundos became a dependent of the Pergamene Kingdom, and in 133, BC Roman hegemony in western Asia Minor also included Blaundos. While the city was in a prosperous condition in the 1st and 2nd centuries AD, it fell into decay during the Byzantine era, and the church records indicate that the population decreased gradually from the 9th to the 12th centuries.
As the first ever archaeological excavation in the settlement, a six-week study was carried out by the Uşak Museum in 1995, and, after that, A. Filges carried out surveys in Blaundos in 1999, 2000, and 2002 as part of his PhD. A new period of excavations began in 2018 under the supervision of Prof. Birol Can from Usak University.
As of 2022, the number of coins found in Blaundos is 235. Twenty-four are from the Hellenistic period, and the number of Roman provincial issues is 20, while there are 16 Roman Imperial coins. One hundred and ten coins are from the Late Roman period. The number of coins from the Byzantine period is just five, and lastly, there are two Islamic coins found. Fifty-eight coins, on the other hand, could not be identified due to their poor condition. This paper aims to share the preliminary analysis of the coin finds, which will be published in a more comprehensive study soon.

**Keywords:** Lydia, Blaundos, Coin Finds.

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## Introduction

The ancient city of Blaundos, a Lydian city very close to the Phrygian border, is located approximately 2 km northeast of the village of Sülümenli and 30 km south of the Uşak city centre, which is located in the interior part of the Aegean region (**Fig. 1**). Blaundos was founded on the top and slopes of a peninsula surrounded by a deep canyon on three sides.[1] This location of the city allowed it to have a natural defence system. It is clear, based on the spread area and territorial borders of the settlement, that its strategic position, livelihoods, and cultural/social character were the elements that made Blaundos a significant settlement. The canyon has been inhabited continuously from the Bronze Age to the Byzantine period (Can 2017, 74; 2023b, 393). The city itself, on the other hand, was colonised during the Hellenistic period. On this note, it is necessary to briefly mention the history of the settlement. After the death of Alexander the Great, Phrygia

[1] For more detailed information regarding the location and topography of the settlement, see Filges 2006b, 2–7; Can 2017, 73–74; 2023b, 393.

was given to Antigonos Monophthalmos. With the death of Antigonos in the Battle of Ipsos in 301 BC, most of Anatolia came under the rule of Lysimachos, the governor and king of Thrace, and remained so until the Battle of Koroupedion in 281 BC.[2]

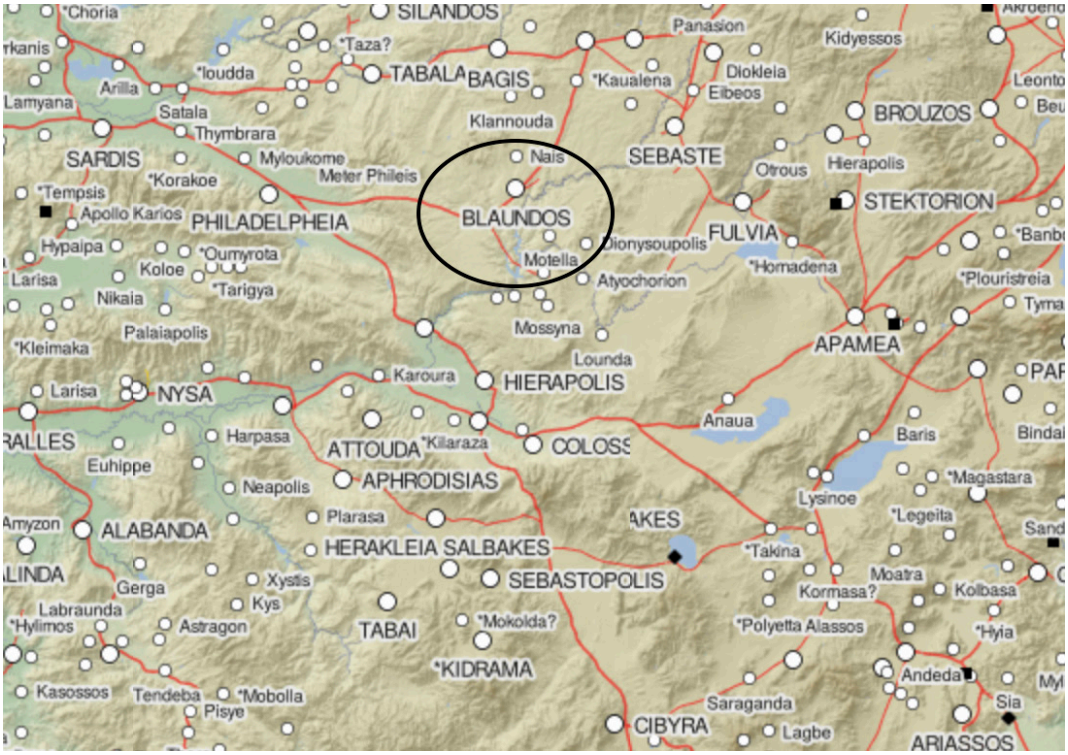


**Fig. 1.** Location of Blaundos.

Based on an inscription found near Blaundos, which reads 'Macedonian Blaundos'(Hamilton 1842, 124ff),[3] it comes to mind that Blaundos was colonised in the last quarter of the 4th century BC or the first quarter of the 3rd century BC by Macedonians. The more prominent view is that it was founded as a colony city by the Macedonians who were in the Seleucid army during the period of the Syria-centred Seleucid Kingdom, which dominated this region for about 100 years from the Battle of Koroupedion in 281 BC to the Treaty of Apameia in 188 BC. Based on current research, it is plausible to suggest that Blaundos was colonised and redesigned by the Seleucids as a military base.[4] Regarding the 2nd century BC, Blaundos was included in the Pergamon Kingdom following the Treaty of Apameia in 188 BC, and when the western part of Asia Minor came under Roman domination in 133 BC, Roman rule also began there.[5] The city must have lived its heyday in the 1st century AD. It is known that architectural investments were made in the city from the middle of the 1st century AD to the middle of the 4th century AD (Can 2023b, 394–397). During the Byzantine era, buildings of relative low quality were built, and it is understood from the church records that the population of the city decreased gradually from the 9th to the 12th centuries (Can 2023b, 394; 400).

[2] For this period and related events, see Hammond 1992, 250ff; Bosworth 2005, 215ff.
[3] Also see Can 2023b, 398.
[4] For opinions and suggestions about the Hellenistic period colonisation of the settlement, see Cohen 1995, 290; Filges 2006c, 20–21; Can 2017, 76; Mitchell 2018, 23–28; Mazzini 2020, 136–137; González 2021, 115. Prof. B. Can, head of the excavation, prepares a comprehensive study regarding the colonisation of Blaundos.
[5] For the influence and impact of the Pergamene and early Roman rule on the city, see Kileci-Can 2020, 302ff.

## Archaeological research in the city

In 1995, a six-week study was carried out by the Uşak Museum – the first excavation in Blaundos. During this study, the structure in the centre of the city, which was later identified as the Temple of Ceres, was excavated.[6] Before the more recent excavations in Blaundos, it was the team headed by A. Filges that carried out the most important work in the city. Surveys were carried out in 1999, 2000, and 2002 as part of Filges' doctoral study. As a result of these studies, very important data regarding the history of the city, as well as detailed plans of the buildings, inscriptions, sculptures, ceramics, and coins, were compiled. This important research was published in 2006, and it is still the main academic source on Blaundos.[7] After a decade, under the presidency of the Uşak Museum and under the scientific consultancy of B. Can from Uşak University, landscaping studies, plant cleaning, and georadar measurements were carried out in the city, and a new period of excavations began in 2018 under the supervision of Prof. Birol Can from Usak University.[8] Five excavation seasons have passed since 2018, and very significant progress was made. The first period of studies has focused on the main street and the structures around it (Can et al. 2020).

## Coin finds (2018–2022)

First of all, this paper just presents a preliminary analysis of the coins. Along with a general overview, some significant conclusions and highlights are shared here. As I joined the team in 2022, I have not yet made a detailed analysis of the previous findings. A comprehensive publication of the coins found in Blaundos is planned to be published soon.

As of 2022, there are 235 coin finds from Blaundos. The first season of the excavations yielded 59 coins in total, the second season yielded 31 coins, the third 34 coins, the fourth 46 coins, and the last season, 2022, 65 coins (**Fig. 2**). Among them, only three coins are silver, four are antoninianus, and the rest are bronze issues. Two of the silvers are from the Ottoman period (15th and 16th centuries) and the other is an illegible Greek coin.

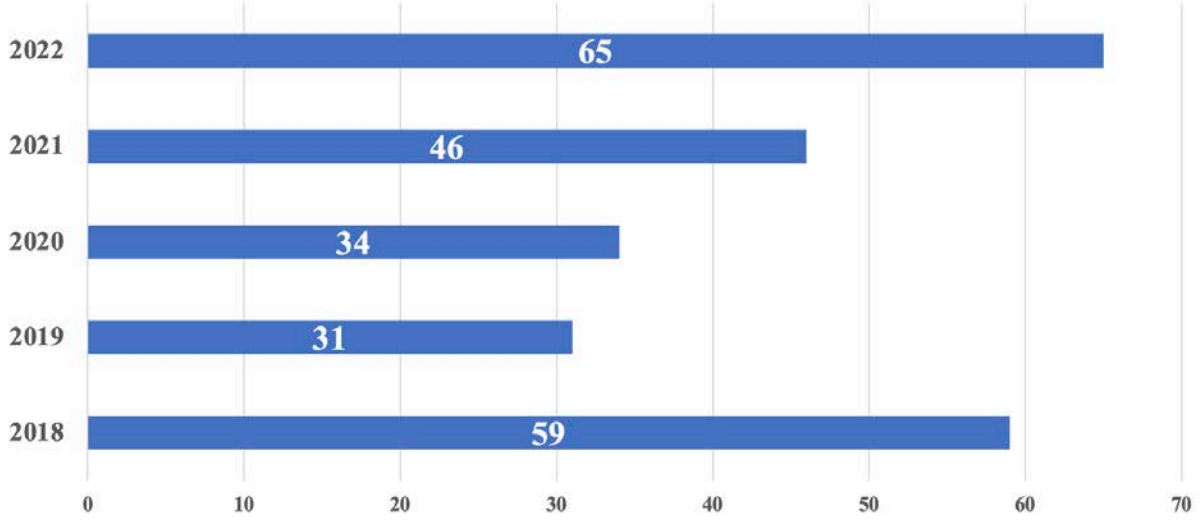


**Fig. 2.** Number of coins found in Blaundos so far.

[6] For the results of the excavations carried out by Uşak Museum, see Akbıyıkoğlu 1997.
[7] For these studies administered by A. Filges and their results, see Filges 2006a.
[8] For a preliminary analysis, see Can 2017. For the results of the studies, see Can 2023a; 2023b, 397–401. As of 2024 a new team has been appointed to the excavation.

For the first two seasons (2018 and 2019), most of the coins were from the main street and the surrounding areas, as the excavation focused on these locales. Out of the 90 coins from these seasons, 56 (c. 62%) were found on the main street and its immediate surroundings. From 2021, the excavations in the Temple of Ceres have begun and yielded many coin finds. The total number of coins found there is 65. What is interesting on first glance is that the finds from this temple are from the Hellenistic to the Late Roman periods.[9] A monographic study regarding the structure, which would include numismatic finds as well as other archaeological material, is necessary to understand it better.

When it comes to the earliest and latest coin finds from the settlement, the earliest find is a Macedonian royal issue (**Fig. 3**). It is a specimen of the shield/helmet series from the late 4th century. As it is corroded, it is not possible to determine its emission but in the light of its iconography (with the head of Gorgoneion on the obverse side), we can say that it is from c. 323–315 BC.

**Fig. 3.** Macedonian royal bronze issue, Photo: excavation archives.

However, this is the proposed date for its minting, and the period of use must have been longer. It is a significant find for presenting evidence for the earlier days of the settlement. Unfortunately, this coin is a surface find. If we can find more of these bronzes from specific trenches, it will surely become possible to elaborate more precisely on the Macedonian presence in the city. As of 2022, the latest coin find is an Ottoman silver from the late 16th century (**Fig. 4**). It belongs to the reign of Mehmed III, struck in Hijri 1003 (AD 1594–1595).[10] This is the only 16th-century find so far. As the settlement was abandoned as early as the 13th century, it is possible to consider it as a lost/dropped coin.

**Fig. 4.** Ottoman silver coin from the 16th century, Photo: excavation archives.

When we take a look at the general periodical distribution, there are 24 coins from the Hellenistic period. There are 20 Roman provincial issues and 16 Roman Imperial coins. There are 110 coins from the Late Roman period, thus constituting the densest group of finds. In accordance with the historical pattern of the settlement, there are only five coins from the Byzantine period and, lastly, there are two Islamic coins found. Fifty-eight coins, on the other hand, could not be identified due to their poor condition (**Fig. 5**).

[9] It is suggested that the existing temple was built in the 1st century AD during the reign of Claudius. However, the structure must have been used with a similar function before the Roman era. Not only Hellenistic period coins but also ceramics from the 2nd century BC have been found there. For more detailed information about this structure, see Roos, Filges 2006. Also see Akbıyıkoğlu 1997, 30–31.

[10] I would like to thank B. Teoman for her identification of the coin.

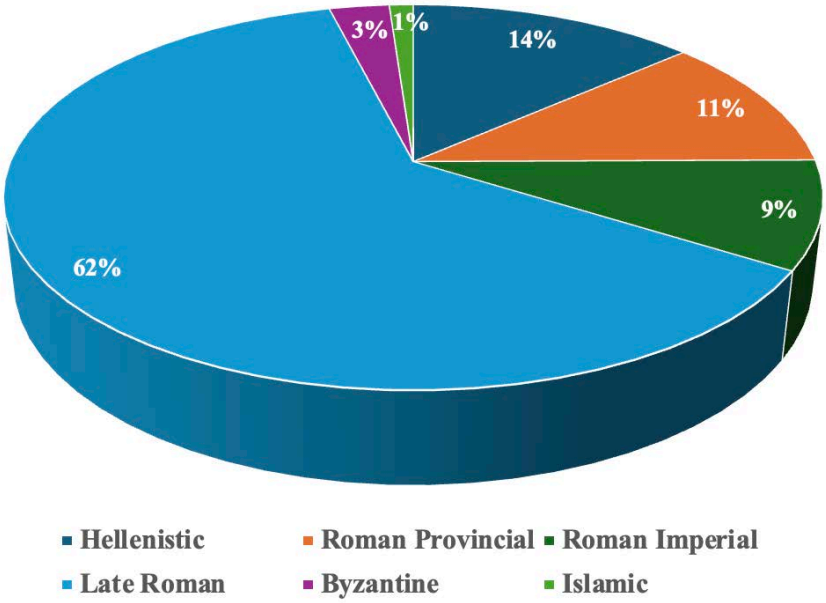


**Fig. 5.** Periodical distribution of coin finds.

Coins from the Hellenistic period are additionally significant, as dating the earlier phase of the settlement is problematic regarding its colonisation and the following situation of the city. Although the number of coins is not sufficient at this stage to make a comprehensive analysis of the era, what is available is important for a preliminary idea. For now, among 24 coins, there are six coins of Blaundos, three coins of Sardis (2nd–1st centuries BC), one coin of Laodikeia (2nd century BC), and, as mentioned above, one Macedonian royal issue (c. 323–315 BC). On the other hand, unfortunately, the rest of the coins are mostly illegible. Among the illegible specimens, there is one interesting coin which is broken, and the other half is missing. Its more legible obverse side and the metrology brings to mind the possibility of it being a Ptolemaic royal bronze from the 3rd century BC (**Fig. 6**). If this hypothetical interpretation is later supported by further Ptolemaic finds, the Hellenistic period of the settlement would of course take another turn.

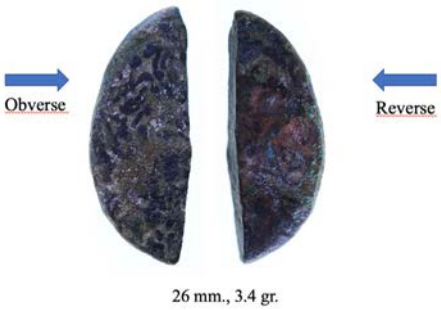


**Fig. 6.** Unidentified bronze (Ptolemaic?), Photo: excavation archives.

Civic coin finds, on the other hand, despite being quantitatively insufficient for now, clearly show Blaundos' interaction with the nearby cities (**Fig. 7**). The route following the only convenient road from the north as far as Sardis and through the Hermos Valley is visible even in light of this minor group of finds. As the material accumulates, Blaundos' relations with the region during the Hellenistic period will surely be clearer and more apparent with regard to the pattern of the coin circulation. On the other hand, among the six specimens of Blaundos' own issues, there is not yet any unrecorded or unpublished coin. This is an important point because Birch (1844, 11) and Imhoof-Blumer (1883, 385, n. 6) catalogued two rare bronze specimens, but these coins have not

been published or recorded in the auctions since then.[11]

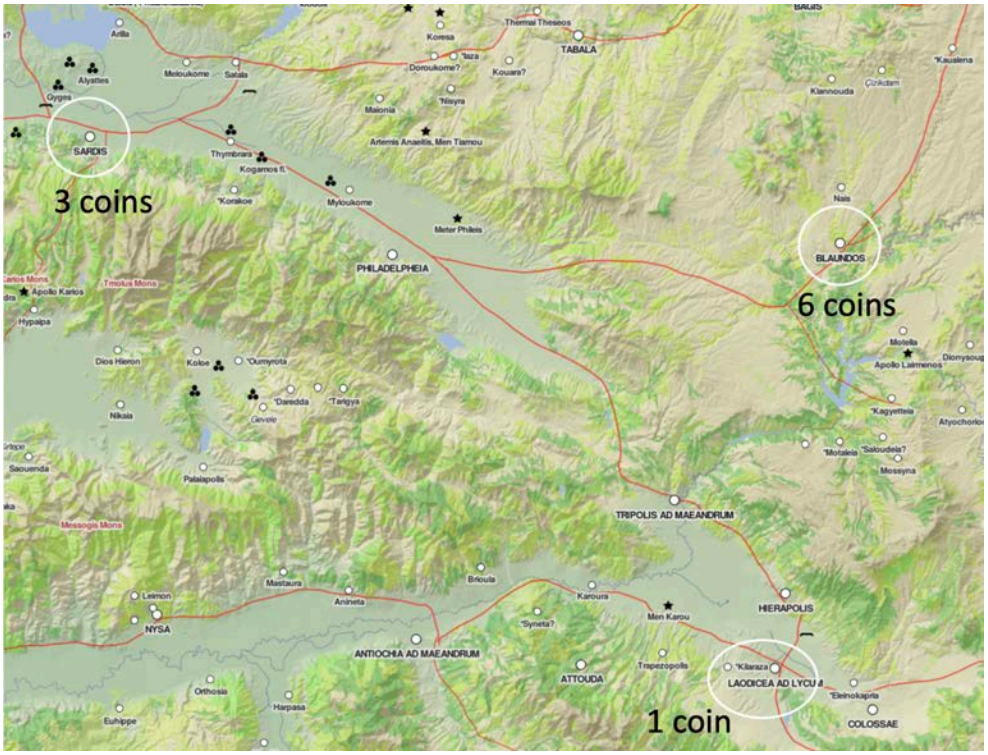


**Fig. 7.** Hellenistic period civic coins found in Blaundos shown on the map.

As stated above, there are 20 Roman provincial coins found in Blaundos. The issues are of Blaundos (five coins), Silandos (two coins), Tripolis (two coins), Sala (one coin) in Lydia, Traianopolis (1 coin) in Phrygia, and Antiokheia ad Maeandrum (one coin) in Caria (**Fig. 8**). Finally, there is a single specimen from the Syrian province. Seven coins are unidentified issues.

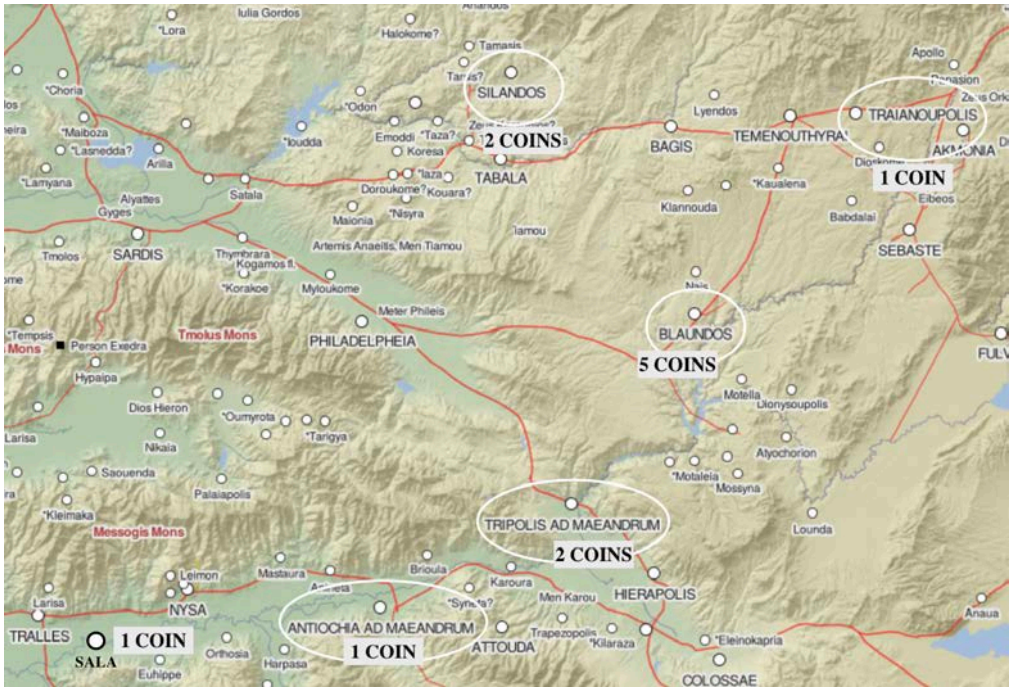


**Fig. 8.** Roman provincial coins found in Blaundos shown on the map.

[11] As catalogued by Birch: bearded male head r./ ΜΛΑΥΝΔΕΩΝ, Fortuna holding cornucopia and rudder; Imhoof-Blumer: wreathed head of Asclepius r./ ΜΛΑΥΝΔΕΩΝ, Coiled serpent.

Issues of Blaundos are from the reigns of Nero (as Caesar), Septimius Severus, and Trebonianus Gallus (RPC I, n. 3060; RPC IX, n. 748; GRPC, n. 119). Another two coins are pseudo-autonomous issues, and their minting period is not well attested (RPC IV.2, n. 1196; RPC IX, n. 752A). Coins of Silandos, on the other hand, are in the name of the emperor Marcus Aurelius, dated to AD 163–165, as they carry the name of magistrate Attalianos (RPC IV.2, n. 1500). One of them is a previously unpublished medallion, and it is the most striking find so far from Blaundos (**Fig. 9**). It is a medallion of Faustina the younger struck by Silandos found within a wall of a Byzantine-period structure on the main street. The fact that it was found in a Byzantine-period workshop also makes it difficult to establish its original context. Considering the fact that medallions were presented to members of local elites, perhaps it was given to such a person living in Blaundos. This movement of the medallion is most likely explained as the result of some relationship between two nearby cities.[12]

**Fig. 9.** Medallion in the name of Faustina II, Photo: excavation archives.

Coins of Tripolis and Sala are, on the other hand, pseudo-autonomous issues.[13] A bronze of Traianopolis, the only Phrygian issue found in Blaundos, is also a pseudo-autonomous coin and is from the period of the Antonine Dynasty (RPC IV/2, n. 3352). Finally, a coin of the Carian city Antiokheia ad Maeandrum is attributed to the reign of Tiberius (RPC I, n. 2835), making this specimen the earliest provincial coin found in Blaundos. Apart from these coins from Asia Minor, there is one bronze from the Syrian province, and it is the one and only issue from such a distant territory. This partially illegible coin is probably from the reign of Augustus (cf. RPC I, n. 4102–4107).

These issues, just like the Hellenistic period civic coins, are significant for understanding the coin circulation in the city and more generally in the region. For now, the circulation is limited to Lydia as well as Phrygia and northern Caria, which are neighbouring regions. As a de facto rule, bronze coins remain in and around where they were struck, so the circulation pattern is not surprising.

Among the 16 Roman imperial coins found in Blaundos, it has been possible to determine the issuing authority of five of them. These coins are from four different emperors: Tiberius (as Caesar; 1 coin), Gallienus (2 coins), and Claudius II (1 coin).[14] One partially illegible issue is probably from the reign of Florianus. All these specimens were struck in Rome. On the other hand, almost all of the other imperial issues are heavily corroded, and their issuing authority as well as minting place could not be determined. As Roman Provincial coins were the main currency until the middle of the 3rd century, imperial issues are few in number.

Late Roman imperial bronzes are the concrete traces from the late 3rd and 4th century history of Blaundos. Following the cessation of provincial issues, the currency of the empire became more uniform, and imperial mints began to strike coins. Coins from this period are the highest in number, and there are 110 coins as of 2022. As a result of the preliminary study of these coins, it has been possible to determine the issuing authority of only a small portion of the total, as most of the coins are heavily corroded. Identified coins are from the reigns of Maximianus (four coins), Diocletianus (one coin), Constantinus I (six coins), Crispus (one coin), Licinius II (three coins),

[12] See Tatar 2023 for a detailed analysis and discussion of the medallion.
[13] Tripolis: RPC IV.2, n. 9972; Cfr. RPC IV.2, n. 1648; RPC VI, n. 5570; Sala: RPC III, n. 2438.
[14] Tiberius: RIC I, n. 471; Gallienus: RIC V, n. 178 or 179; RIC V, n. 283.

Constantinus II (three coins), Constantius II (three coins), Valens (one coin), Gratianus (one coin), Arcadius (four coins), Honorius (one coin), Theodosius II (two coins), Eudoxia (two coins), and Zenonis (one coin). On the other hand, some partially legible coins could be at least attributed to a certain time period, if not to a certain reign. Among them, there are 15 coins from the period of the Constantinian Dynasty, two coins from the Valentinian Dynasty, and six coins from Theodosian Dynasty. Finally, 54 coins are illegible. When we examine the mints of coins which ended up in Blaundos, among legible issues there are coins from Kyzikos (12 coins), Constantinopolis (four coins), Thessalonika (four coins), Nikomedia (three coins), Herakleia (two coins), Antiokheia (two coins), Siscia (one coin), and Trier (one coin). Finally, there is one issue either struck in Kyzikos or Alexandreia.

Finally, there are five Byzantine coins and two Ottoman coins. Among the five Byzantine issues, three are from the early Byzantine period, i.e., the late 6th century AD. While two coins are from the reign of Justin II, one is in the name of Maurice Tiberius. The other legible issue is from the 11th century, and it is an issue of Nicephorus III. Lastly, there is a surfrapped bronze coin. It is seen that on an issue of Emperor Phokas, a coin in the name of Heraclius was struck. Coins from the reign of Justin II are Constantinople issues, while the coin in the name of M. Tiberius was struck in Thessalonika. As previously attested, the Byzantine era of the settlement is not represented densely by the coin finds, and there is a huge gap between the 6th century and later periods. Two Ottoman coins, on the other hand, are the latest numismatic evidence found in Blaundos. One of them is from the 15th century, while the other is from the late 16th century. This silver specimen is in the name of Murat III and was struck in Constantinople.

## Conclusion

Each excavation season in Blaundos has yielded a considerable number of coins. As is the case with most of the ancient settlements in Asia Minor, coins from the Late Roman era are the highest in number. A medallion of Faustina II has been the most significant numismatic find of five excavation seasons in Blaundos. On the other hand, Macedonian royal bronzes might turn out to be the first numismatic evidence for the Macedonian colonisation of the settlement. As it is a surface find and the only specimen so far, further finds are necessary to make a more decisive comment regarding the subject. Regarding the theory of Seleucid period colonisation of Blaundos, there is no numismatic data to support this opinion yet. Potential finds of Macedonian and Seleucid coins are key in understanding the Hellenistic period colonisation of the city. Such numismatic finds will also let us know what kind of colonisation took place in the settlement – whether it was a military colonisation as commonly suggested or whether this was in the form of establishing an active military garrison or settling retired mercenaries in the city. Another issue is the civic coins of Blaundos. The city struck its own coinage in the late Hellenistic period; however, a certain chronology could not be established yet. For now, it seems plausible that Blaundos began to strike its own coins from the middle of the 2nd century BC. [15] In the light of a comprehensive study including numismatic finds and other archaeological materials, a more precise dating of these coins will be possible.

### Bibliography

Akbıyıkoğlu, K., 1997. 1995 Yılı Blaundos (Sülümenli) Kazısı. VII. Müze Kurtarma Kazıları Semineri, 29–48.

Birch, S., 1844. Observations on Some Unedited Coins, Principally of Asia Minor. The Numismatic Chronicle and Journal of the Numismatic Society 7, 5–18.

Bosworth, A. B., 2005. Büyük İskender'in Yaşamı ve Fetihleri: Fetih ve İmparatorluk, Translateed by Çalışkan, H., Ankara.

[15] For the analysis, discussion and detailed information about the Hellenistic period civic coins of Blaundos, see. Tatar 2024.

Can, B., 2017. Blaundos Antik Kenti, in: Czichon, R. et al. (eds.), Yüzey Araştırmaları ve Kazılar Işığında Uşak. Uşak Müzesi Müdürlüğü, Lidya Bölgesi Arkeolojisi Uygulama ve Araştırma Merkezi, İstanbul, 73–82.

Can, B., 2023a. Blaundos Antik Kenti 2019–2021 Çalışmaları (İkinci, Üçüncü ve Dördüncü Sezonu). 42. Kazı Sonuçları Toplantısı, 453–469.

Can, B., 2023b. Blaundos Antik Kenti ve Kazıları, in: Sarısaman, S., Ceylan S. (eds.), Kurtuluşun 100. Yılında Uşak. Palet Yayınları, Konya, 393–403.

Can, B., Söyler, Ş., Keklik Dündar, G., 2020. Blaundos Antik Kenti 2018 Yılı (İlk Sezon) Çalışmaları. 41. Kazı Sonuçları Toplantısı, 393–409.

Cohen, G. M., 1995. The Hellenistic Settlements. Berkeley.

Filges, A. (ed.), 2006a. Blaundos; Berichte zur Erforschung einer Kleinstadt im lydisch-phrygischen Grenzgebiet. Tübingen.

Filges, A., 2006b. Einleitung. in: Filges, A. (ed.), Blaundos; Berichte zur Erforschung einer Kleinstadt im lydisch-phrygischen Grenzgebiet. E. Wasmuth, Tübingen, 1–13.

Filges, A., 2006c. Von Mlaundos zu Blaundos. Literarische Quellen und Überlegungen zur Frühen Geschichte bis zur Integration in das Pergamenische Reich, in: Filges, A. (ed.), Blaundos; Berichte zur Erforschung einer Kleinstadt im lydisch-phrygischen Grenzgebiet, E. Wasmuth, Tübingen, 17–21.

González, C. M., 2021. The Macedonian Army as a Vehicle for Change? Military Presence in Western Asia Minor During the Early Hellenistic Period: Topography, Agency and Identity. University College, (Unpublished Phd.). London.

GRPC = Kurt, D., 2020. Greek and Roman Provincial Coins: Lydia, Vol. I–IV. İstanbul.

Hamilton, W. J., 1842. Researches in Asia Minor, Pontus and Armenia, with Some Account of Their Antiquities and Geology, I.II. London.

Hammond, N. G. L., 1992. The Macedonian State: Origins, Institutions, and History. Oxford.

Imhoof-Blumer, F., 1883. Monnaies Grecques, Amsterdam.

Kileci, Ş., Can, B., 2020. A New Honorific Inscription from Blaundos: Tiberius Claudius Lucius, the Priest of Dionysos Kathegemon. Adalya 23, 297–309.

Mazzini, L., 2020. Triggered Identity: The Use of Macedonian Ethnic by Blaundos in Confrontation with the Roman Empire, in: Irvin, A. W. (ed.), In Community and Identity at the Edges of the Classical World. John Wiley & Sons Inc., New York, 131–188.

Mitchell, S., 2018. Dispelling Seleukid Phantoms: Macedonians in Western Asia Minor from Alexander to the Attalids, in: Kyle, E. (ed.), In The Seleukid Empire, 281–222 BC: War Within the Family. The Classical Press of Wales, Swansea, 11-–35.

RPC = Roman Provincial Coinage online. http://rpc.ashmus.ox.ac.uk/

Roos, D., Filges, A., 2006. Das Ceres-Heiligtum im Stadtzentrum, in: Filges, A. (ed.), Blaundos; Berichte zur Erforschung einer Kleinstadt im lydisch-phrygischen Grenzgebiet. E. Wasmuth, Tübingen, 140–188.

Tatar, Ö., 2023. A Unique Silandos Medallion of Faustina II from Blaundos in Lydia. Journal of Roman Archaeology 36, 186–195.

Tatar, Ö., 2024. Blaundos'un Hellenistik Dönem Sikke Darbı. Anadolu 50, 193-223. 10.36891/anatolia.1426143

# Recent Numismatic Finds of Greek and Roman Period from Histria (Romania)

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**Abstract:** Starting with 2013, a new archaeological project, supported by the University of Bucharest, was implemented at Histria (Romania). The Acropolis Centre-South Sector, covering approximately 2000 square meters, is situated in the southern area of the city's acropolis. The authors present Greek, Roman, and Early Byzantine coins found during the excavations on this new sector. These finds reflect the monetary circulation on the Western Coast of the Black Sea, from the earliest wheel-type coins issued by the city, going through local issues dated to the 4th – 1st centuries BC (some of them countermarked), Roman coinage (including rarer issues, such as the Apollo on the omphalos type issued by Histria, or issues from Amphipolis for Augustus or Thessaloniki for Nero), and ending with the most recent, folles dated to the first decades of the 7th century AD, marking the end of the habitation of Histria.

**Keywords:** Histria, Greek coins, Roman coins.

BulgNJ

In 2013, a team coordinated by the University of Bucharest (Romania) joined the other research groups conducting archaeological excavations at Istros/Histria, the Greek colony of Miletus situated on the western coast of the Black Sea. The new sector, named the Acropolis Centre-South Sector (ACS) due to its location in the ancient city (**Fig. 1**), brought to light structures which proved to be a 6th–7th-century AD *insula* (Bottez 2022, with the latest bibliography), conven-

tionally called Insula Iα (**Fig. 2**). The insula is composed of at least two residential buildings and is delimited to the north, east, and west by Street C, Street ST01, and Street ST02 respectively; to the south it is delimited by the Late Roman defensive wall (**Fig. 3**).

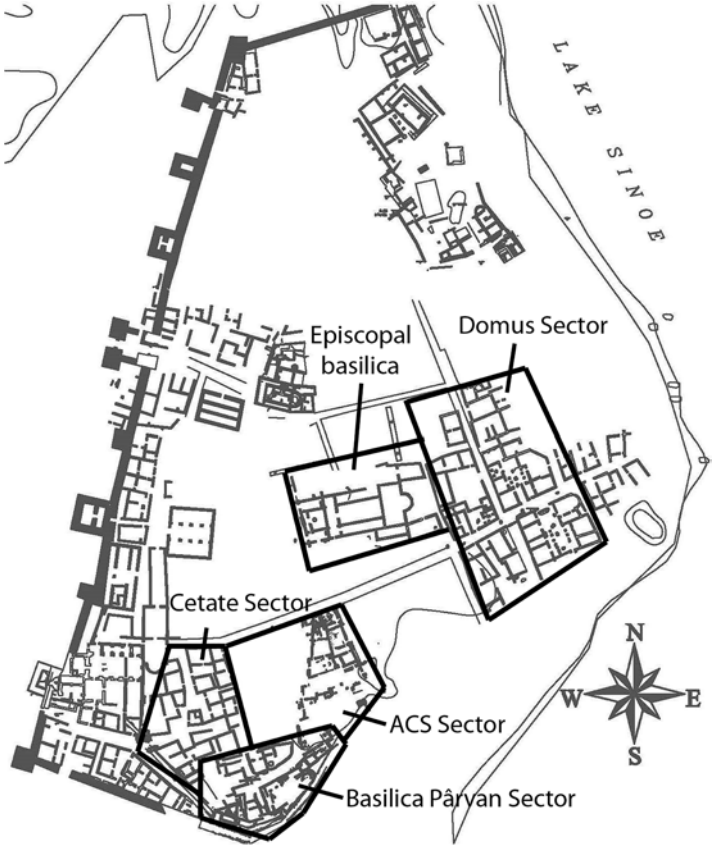


**Fig. 1.** Location of the Acropolis Centre-South Sector at Histria, Romania (after Bottez 2022, fig. 1).

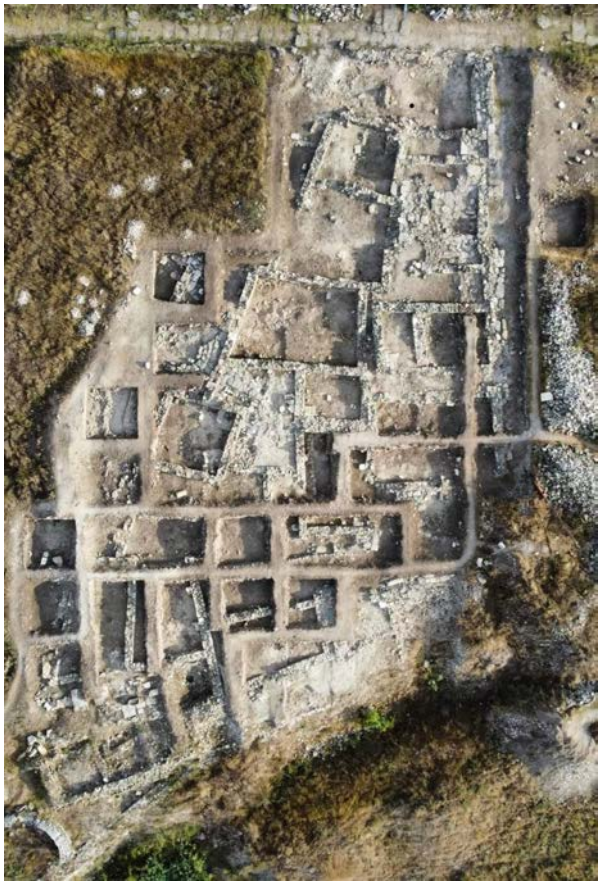

**Fig. 2.** The 6th–7th-century AD insula from the Acropolis Centre-South Sector: view from above (V. Bottez).

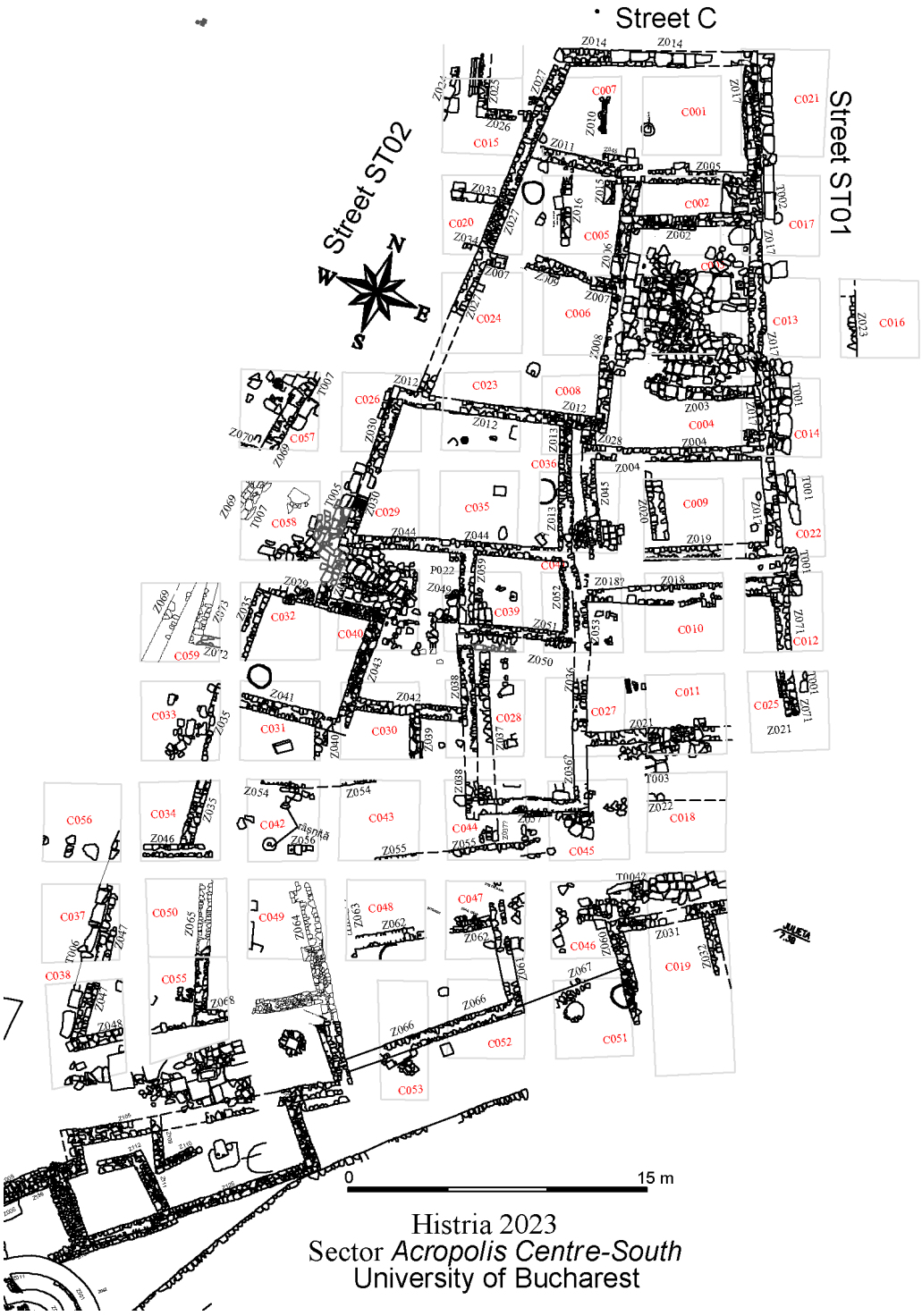


**Fig. 3.** The plan of the 6th–7th-century AD insula from the Acropolis Centre-South Sector (V. Bottez).

From a chronological point of view, three construction/functioning phases could be identified. The first is dated to the first half of the 6th century AD and could have been ended by the Kutrigur raid of 559 (Bottez et al. 2018, 321). The second phase was dated to the reign of Justin II and corresponds to a general period of rebuilding throughout the Late Roman city; inside the insula, this phase is marked by blocked entrances, new entrances opened by the dismantling of wall segments, *dolia* taken out of use (Bottez et al. 2018, 317), and new interior divisions of the space using mudbrick walls. The third phase was identified with certainty only in the southern part of the northern nucleus, in the space conventionally called NSp07b (Bottez 2022, 261), and it is the only 7th-century context to be clearly documented in Histria up to now.

As far as their functionality is concerned, the spaces conventionally called NSp06, NSp05 (then NSp05b during the second functioning phase of the insula), and SSp13 seem to have served as food storage facilities – maybe even *cauponae* – while NSp01, SSp11, and SSp14 were open spaces, maybe courtyards (Bottez 2022, 265).

The archaeological research on the ACS – conducted uninterrupted for more than a decade now – brought to light rich and varied numismatic material, consisting of more than 400 Greek, Roman, and Early Byzantine coins (Vîlcu, Ţârlea 2016, 159–166; Ţârlea et al. 2018, 197–209). The majority of the finds belong to the Late Roman/Early Byzantine period, corresponding to the last phases of inhabitation of the insula, but coins issued by Istros during the autonomous period – as well as issues of other Greek cities, Macedonia, and of Early Roman period – are also present in the archaeological record of the sector.

The aim of this paper is to present an overview of the items identified until present, as the restoration and conservation of this category of finds is an ongoing process.

The earliest coins are local issues with the four-spoked wheel on the obverse and the legend IΣT on the reverse (**Fig. 4**), loosely dated to 450–350 BC (Poenaru Bordea 2001, 15). The archaeological excavations taking place at Istros/Histria starting in 1914 showed that this type of coin forms a well-represented category of the numismatic material found at the site (Preda, Nubar 1973, 32–37). Still, it should be mentioned that, from a chronological perspective, the earliest numismatic find from the city is a hekte made of electrum (1/6 stater), struck by Kyzikos during the 7th–6th centuries BC, marking the beginning of the Greek habitation in this area (Dimitriu 1957, 103; Vîlcu et al. 2006, 69). Unfortunately, it is difficult to establish a clear chronological context for this find beyond the fact that the archaeological material recovered from that area was dated to the 6th century BC. The presence at Istros of a coin issued by Kyzikos is not a fluke, as more recent research has brought to light another hekte issued during the first half of the 5th century BC. The numismatic material recovered so far from Istros/Histria indicates that among the oldest coins are also base metal issues from Olbia with Medusa on the obverse and the legend APIX on the reverse, dated towards the middle of the 5th century BC. One of these coins was found during old excavations (Preda, Nubar 1973, 138), while the other two were found during a verification excavation in 2003 in the BTG Sector, in a layer showing traces of fire and containing ceramic shards, of which the most recent were dated to the middle of the 5th century BC (Domăneanţu 2004, 159–160). Most probably, the Olbian issues with Medusa on the obverse were in circulation during the same timeframe as the local wheel-type issues.

**Fig. 4.** Istros, wheel type coin, c. 450–350 BC (A. Vîlcu).

Other local issues characteristic for the autonomous period of Istros and represented in the numismatic record of the Acropolis Centre-South Sector are base metal coins of the River God type (**Fig. 5**), Apollo type (**Figs. 6–7**), and Demeter type (**Fig. 8**) – all reflecting the use of the small

denomination coinage characteristic for everyday transactions of the 4th–2nd centuries BC (Preda, Nubar 1973, 37–45). An interesting phenomenon noticed in some cases is the countermarking of older bronze coins, a procedure allowing the prolongation of their use on the market (Preda, Nubar 1973, 45–47). In the last mentioned category, two Istrian coins found on the Acropolis Centre-South Sector are unusual in that the countermark covers the entire image found initially on the obverse, practically erasing it. The countermark illustrates the head of Hermes and covers the entire surface of the obverse, replacing the original deity — most probably Apollo (**Fig. 9**). The religious or political motivation in the background of this unusual countermarking method is difficult to determine for the moment (for the phenomenon of countermarking at Istros, see Preda, Nubar 1973, 45–47; Talmațchi 2011, 550–555). Still, taking into consideration the chronology of the original issue, the intervention seems to have taken place after the middle of the 3rd century BC. This dating is also suggested by the significant changes in the iconography of the gold coins issued by Istros during the second half of the 3rd century BC, when the transition from the Alexander the Great type staters to the Lysimachus type staters took place. The abandonment of the staters of the Alexander the Great type in favour of those of Lysimachus type took place in the wake of the war between Istros, Kallatis, and Byzantion, a local phase of the conflicts between the Seleucids and the Ptolemy dynasty which left a mark on the Hellenistic world during the 3rd century BC (Vîlcu, Petac 2012, 53–60; Vîlcu 2014, 93–104). The dominance of Byzantion and its allies in the Black Sea determined significant changes in the numismatic iconography used by the West-Pontic cities, the most illustrative being the case of the gold coinage. After the middle of the 3rd century BC, Kallatis ended its gold coins issuing, while Istros gave up the Alexander the Great type staters and adopted the iconography specific for the Lysimachus type staters in use at Byzantion. Tomis, a city developing substantially – especially after the middle of the 3rd century BC – circulated its first gold issues directly on the model of the Lysimachus type staters from Byzantion (Petac, Vîlcu 2015–2016, 499–507). The gold coins reflect more precisely the political relations, as they were used by the West-Pontic cities mainly to pay for protection from the part of local rulers or for the services of mercenaries. Not one gold stater has been found so far during the archaeological excavations in the city of Istros/Histria; additionally, the silver didrachms represent a rare occurrence in the city itself, with only three exemplars having been found until now (Preda, Nubar 1973, 19; Preda 1998, 57).

**Fig. 5.** Istros, River God type coin (A. Vîlcu).

**Fig. 6.** Istros, Apollo type coin (A. Vîlcu).

**Fig. 7.** Istros, Apollo type, countermarked on the obverse (A. Vîlcu).

**Fig. 8.** Istros, Demeter type (A. Vîlcu).

**Fig. 9.** Istros, with Hermes type countermark (A. Vîlcu).

From this perspective, the finds from the Acropolis Centre-South Sector respect the general trend, as all the coins issued by the city during the autonomous period found here are made of copper or copper alloys (Țârlea et al. 2018, 197–209). Absent so far are the silver issues of the city circulating in large numbers during the 5th–3rd centuries BC, as demonstrated by the treasures found in Romania, Republic of Moldova, and Bulgaria (Preda 1998, 54–60; Dima 2014; Vîlcu, Nicolae 2016, 121–127).

Base metal coins issued during the reign of Phillip II (359–336 BC) with the head of Apollo looking to the right on the obverse (**Fig. 10**), as well as coins of the Alexander the Great type (336–323 BC), which are generally well documented at Istros (Preda, Nubar 1973, 51–52), were also found in the excavations from the Acropolis Centre-South Sector, reflecting the integration of the city into Macedonian political sphere.

**Fig. 10.** Macedonia, Philip II (after Vîlcu, Țârlea 2016, 163.8).

Going further to the Roman period, the earliest coin found so far was issued by Amphipolis; the coin presents the bust of Augustus on the obverse and the image of Artemis Tauropolis on the reverse (**Fig. 11**). The next coin chronologically was issued by Thessaloniki for Emperor Nero (**Fig. 12**). Both these coins represent rarities and reflect the connections of Histria with the area of the former Macedonian kingdom at the end of the 1st century BC and during the next century.

**Fig. 11.** Amphipolis, Augustus (A. Vîlcu).

**Fig. 12.** Thessalonica, Nero (A. Vîlcu).

Only three coins of the batch analysed until now can be dated to the 2nd century AD, of which two local issues and an as issued by Lucius Aelius Caesar in 137 (**Fig. 13**). One remarkable local issue put into circulation during the Roman period by Histria is a pseudo-autonomous coin, with Apollo seated on the *omphalos* on the obverse and Dionysus standing, turning towards the left and accompanied by the legend ICTPIA-NΩN, on the reverse (**Fig. 14**). This coin was found in association with various materials, including a bronze coin from Galerius Maximian Caesar of the CONCORDIA MILITVM type, issued by Heraklea during AD 295–296 (**Fig. 15**). The local issue with Apollo seated on the omphalos is a rare find, with only three other items known from older archaeological excavations at Histria (Vîlcu, Țârlea 2016, 162). The XRF analysis of the metal composition of all the four coins belonging to this type recovered from Histria so far indicates that they were made of brass (Țârlea et al. 2018, Fig. 7, Tables 3 and 6). Regarding the dating of this monetary type, it was initially presumed that it was put into circulation by the city during the 1st century AD or at the beginning of the next century (Preda, Nubar 1973, 44), but recently – based on stylistic similarities (Beldianu 2014, 109–110) – a later interval was proposed, more specifically during the reign of Commodus (AD 180–192).

**Fig. 13.** Lucius Aelius Caesar, AD 137 (A. Vîlcu).

**Fig. 14.** Istros, Apollo on omphalos type (after Vîlcu, Țârlea 2016, 163.13).

**Fig. 15.** Galerius Maximian Caesar, CONCORDIA MILITVM type, AD 295/296 (after Vîlcu, Țârlea 2016, 163.14).

The finds representing the 3rd century AD include coins issued by neighbouring Greek cities, as is the case of a tetrassarion from Tomis (**Fig. 16**) issued for Gordian III (AD 238–244), also made of brass (Țârlea et al. 2018, Fig. 7, Table 6). For the period between the middle of the 3rd century and the tetrarchy, the numismatic material is scarce, being represented by two coins issued during the reign of Probus (AD 276–282; **Fig. 17**).

**Fig.16.** Tomis, tetrassarion, Gordian III, AD 238–244, (A. Vîlcu).

**Fig. 17.** Probus, AD 276–282, SALVS AVG type (A. Vîlcu).

The time of the tetrarchy and the first part of the 4th century AD are well represented by 32 items issued for Diocletian, Maximianus, Galerius, Licinius I (**Fig. 18**), Constantine the Great (**Fig. 19**), Constantine II, Constans, and Constantius II. Among the rarer issues is a base metal coin with the legend CONSTANTINIANA DAFNE on the reverse, issued by Constantine I at Constantinople in AD 328/329 (**Fig. 20**); it is the only one of this kind found so far at Histria (Vîlcu, Țârlea 2016, 163).

**Fig. 18.** Licinius I, IOVI CONSERVATORI type, AD 313/315 (after Vîlcu, Țârlea 2016, 163.15).

**Fig. 19.** Constantine the Great, PROVIDENTIAE AVGG type, AD 324/325 (A. Vîlcu).

**Fig. 20.** Constantine the Great, CONSTANTINIANA DAFNE type, AD 328/329 (after Vîlcu, Țârlea 2016, 163.2).

The numismatic material dated to the second half of the 4th century and the 5th century AD identified so far consists of bronze coins issued by Valens (four coins), Arcadius (one coin), Marcian (one coin), and Zeno (one coin). The research from this sector of the city confirms the rarity of the coinage dated to the second half of the 5th century at Histria, with only three coins from Marcian having been published (**Fig. 21**).

**Fig. 21.** Marcian, AD 450–457, with monogram on reverse (A. Vîlcu).

The latest coins found in the Acropolis Centre-South Sector are Early Byzantine base metal coins issued after the reform of Anastasius from 498 and used during the 6th century and the beginning of the 7th century (19 items identified until present). The coinage is in general represented by folles (M) and half folles (K), but also by a small number of items with a smaller denomination,

such as 10 nummia (I) and five nummia (Є), used in everyday transactions. The finds from this sector show so far a feeble presence of coins from Anastasius I, Justin I, and the first part of the reign of Justinian I **(Fig. 22**).

**Fig. 22.** Justinian I, follis, Antiochia, AD 554/555 (after Vîlcu, Țârlea 2016, 163.19).

Starting with the middle of the 6th century, the Byzantine monetary production is well represented, with the majority of the finds being folles and half folles issued by Justin II (**Fig. 23**), to which a smaller number of folles from Tiberius II Constantine and Mauricius (**Fig. 24**) can be added.

**Fig. 23.** Justin II, follis, Nicomedia, AD 577/578 (A. Vîlcu).

**Fig. 24.** Mauricius, follis, Antiochia, AD 593/594 A. Vîlcu).

One follis dated to 607/608 and a half follis from 603–610 – both issued for Phocas (**Figs. 25–26**) – come to join the latest coins from the beginning of the 7th century AD known from Histria until now.

**Fig. 25.** Phocas, 20 nummia, Constantinople, AD 603/610 (after Vîlcu, Țârlea 2016, 164.22).

**Fig. 26.** Phocas, follis, Constantinople, AD 607/608 (A. Vîlcu).

Previous archaeological excavations on other sectors from Histria brought to light 14 folles and half folles from Phocas, as well as a gold solidus of 22 siliquae from 609–610 (Vîlcu et al. 2006, 163). The end of the monetary circulation at Histria took place at the beginning of the reign of Emperor Heraclius, as indicated by the latest issued items found during excavations in the 1950s: a follis from 613 and another from 613/614. The continuation of the habitation on the outskirts of the city is attested by a half follis issued by Heraclius in 613/614 and found in the area of the Sinoe township, and by a gold solidus issued by Constantine IV during 674–681 found in the village of Istria – the only find of this type known so far for the entire region of Dobrudja (Vîlcu et al. 2006, 169; Vîlcu, Țârlea 2016, 161–162).

The numismatic evidence presented in this article, even in a preliminary manner, allows glimpses into the rich and effervescent social, economical, and political life of the Greek city of Istros/Histria during its existence.

**Bibliography**

Beldianu, C.B.N., 2014. Cronologia și tipologia monedelor emise la Histria în epoca romană, București.

Bottez, V., Țârlea, A., Liţu, A, Iliescu, I., 2018. Preliminary report of the excavations at Histria, the Acropolis Centre-South Sector (2015–2016). Peuce 16, 281–324.

Bottez, V., 2022. Preliminary report of the excavations at Histria, the Acropolis Centre-South Sector (2017–2018). Peuce 20, 129–168.

Dima, M., 2014. The Silver Coinage of Istros during the Hellenistic period, Wetteren.

Dimitriu, S., 1957. O monedă divizionară din Cyzic, la Histria. Studii și cercetări de istorie veche 8, 103–112.

Domăneanţu, C. 2004. Istria. Sector BTG. Cronica cercetărilor arheologice din România, campania 2003, București, 159–160.

Petac, E., Vîlcu, A., 2015–2016. About the Early Hellenistic Gold and Silver Coinage from Tomis. Pontica 48–49, 499–507

Poenaru Bordea, Gh., 2001. Atelierul monetar al cetăţii Istros în perioada autonomiei. Simpozion de Numismatică, dedicat împlinirii a patru secole de la prima unire a românilor sub Mihai Voievod Viteazul, Chişinău, 28–30 mai 2000. Comunicări, studii şi note. Chişinău, 9–33.

Preda, C., Nubar, H., 1973. Histria 3. Descoperirile monetare 1914–1970, Bucureşti.

Preda, C. 1998. Istoria monedei în Dacia preromană, București.

Talmațchi, G., 2011. Monetăriile orașelor vest-pontice Histria, Callatis și Tomis în epocă autonomă. Iconografie, legendă, metrologie, cronologie și contramarcare, Cluj-Napoca.

Țârlea, A., Georgescu, M., Vîlcu, A., 2018. The compositional analysis of copper and bronze Greek coins found at Histria (Acropolis Centre-South Sector) using a portable X-ray fluorescence spectrometer. Materiale şi Cercetări Arheologice 14, 197–209.

Vîlcu, A., 2014. Istros et les Séleucides au IIIe siècle av. J.-C. à la lumière des sources numismatiques. Materiale şi Cercetări Arheologice 10, 93–104.

Vîlcu, A., Isvoranu, Th., Nicolae, E. 2006. Les monnaies d'or de l'Institut d'Archéologie de Bucarest, Wetteren.

Vîlcu, A., Nicolae, E., 2016. Aspects de la diffusion des monnaies d'argent istriennes au nord du Danube dans la lumière du trésor découvert à Ivancea, Dacia 60, 121–127.

Vîlcu, A., Petac, E., 2012. The Second Syrian War and Gold Staters of Alexander type struck at Istros. American Journal of Numismatics 24, 53–60.

Vîlcu, A., Țârlea, A., 2016. Descoperiri monetare recente la Histria (Sectorul Acropolă Centru-Sud). Materiale şi Cercetări Arheologice 12, 159–166.

# Once again about the Deultum Medallion for *Caesar* Diadumenian[1]

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**Abstract:** The text presents the results of metal analysis of the Deultum medallion bearing the name and portrait of Caesar Diadumenian, which some numismatists have declared counterfeit. However, the combined historical sources suggest the possibility that this numismatic object is in fact an authentic one. The measurement of its elemental composition is expected to provide further evidence in either direction.

**Keywords:** Deultum, Caesar Diadumenian, Emperor Macrinus, counterfeit, metal analysis.

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## Introduction

A medallion with the name and portrait of *Caesar* Diadumemian (April/May 217 – May 218; see Kienast 2011, 170–171) on the obverse and the abbreviation COL FL PAC DEVLT (standing for *Colonia Flavia Pacis Deultensium*) on the reverse (**Fig. 1**) has attracted a lot of attention since its very first publication, when it was declared to be a counterfeit (Gerassimov 1963). Through the decades, this assessment has both been confirmed by some numismatists (Jurukova 1973, 52-53; Draganov 2007, 181–182) and questioned by historians (Boteva 1997, 328-329) and other numismatists (Kisiov, Prokopov, Dotchev 1998, 54, no 224). Due to the debate, a decision was met to subject this numismatic artifact to metal analysis within the project "Measuring Ancient Thrace" (КП-06-Н50/3 from 30.11.2020, financed by the BNSF). The results of this metal analysis will be presented here below.

**Fig. 1.** Medallion of Caesar Diadumenian, issued in the name of Colonia Flavia Pacis Deultensium (Archaeological Museum – Plovdiv, inv. 1666). Photo: Ilya Prokopov, Courtesy: Archaeological Museum – Plovdiv.

## Focus

Back in 1931, The Archaeological Museum of Plovdiv purchased from a private individual the medallion described above for 1500 Bulgarian leva (Draganov 2007, 181 with nt. 7) and introduced it into the Museum's inventory book under the number 1666 (Kisiov, Prokopov, Dotchev 1998, 54, no 224; Draganov 2007, 181). The diameter of the medallion is 37 mm, its thickness is 6-7 mm, and the weight is 54.41 g. (Draganov 2007, 181). Only in 1963 it was published by Todor Gerassimov, who summarized his observations and judgement as follows:

> "Il existe dans la collection numismatique de Plovdiv un médaillon faux avec le nom de la ville de Deultum de Thrace. Sur le revers de ce médaillon le falsificateur a utilisé la représentation d'un sacrifice existant sur un sesterce de Domitien (Mattingly, Coins of the Roman Empire in the British Museum, II, pl. 78,7). Le graveur moderne n'a pas compris de nombreux détails de cette scène et les a reproduits d'une manière inexacte sur le sceau. Le jeune Diadumenian n'a jamais visité Deultum, et s'est pourquoi il est impossible que le Conseil Municipal ait frappé des médaillons commémoratifs." (Gerassimov 1963, 277).

In her book about the coinage of Deultum (1973) Jordanka Jurukova follows strictly the verdict on the medallion of her university teacher and mentor, Prof. Todor Gerassimov, stating:

> "Bis zum heutigen Tage sind uns keine modernen Fälschungen von den Münzen der Stadt Deultum bekannt. (…) Als einzige interessante Fälschung besitzen wir ein Medaillon mit dem Namen der Stadt Deultum.
>
> Der Grund für die Anfertigung dieses Medaillons dürfte darin zu sehen sein, daß während der römiscehn Herrschaft in vielen Städten Moesiens und Thrakiens eine große Anzahl von Bronzemedaillons geprägt worden sind. Sein unbekannter, aber sehr geschickter "Urheber" wußte vermutlich, daß Deultum überhaupt keine Medaillons geprägt hat, und daher hat er sich vermutlich der Mühe unterzogen, ein Unikum zu schaffen. (…)
>
> Augenfällig sind vor allem die ungewöhnlich gelbe Farbe der Legierung, aus der das Medaillon angefertigt ist, sowie die Dicke des Schrötlings (ungefähr 5 mm) und sein glatter, fast mit einer Feile geschliffener Rand. Abgesehen davon gibt es noch eine Reihe von Eigenheiten bei der Ikonographie, an denen man die Hand eines

modernen Graveurs erblicken kann." (Jurukova 1073, 52).

Further in her publication, Jordanka Jurukova translates into German the observations of Todor Gerassimov concerning the iconographic features of the numismatic artifact supporting the opinion that it is a counterfeit (Jurukova 1973, 52). She also translates Gerassimov's historical reasoning, keeping firmly his belief that Diadumenian never visited Deultum – an essential element within the analysis, due to the fact, that such medallions were minted by the cities in the Roman provinces of Lower Moesia and Thracia only in connection with imperial visits to respective cities (Jurukova 1973, 53). Of course, Jurukova's position is expected due to the huge authority of Todor Gerassimov, who mentored her in the numismatic field of research. However, it should be underlined that Jurukova's judgement on the medallion is published in a book devoted to the entire minting activity of the Roman colony of Deultum, where some important features are standing out. During the brief reign of Emperor Macrinus, who was at the head of the Roman empire for only circa thirteen months, between April 11th, 217, and May 16th, 218 (Kienast 2011, 169; Goldsworthy 2009, 75–77) the mint of Deultum issued an impressive amount of coins for both father and son with numerous obverse dies and several dozens of reverse dies, among them at least four depicting the emperor (Jurukova 1973, 63-73). Highlighting the rare reverse type with the emperor as a priest, Jurukova even puts forward the possibility that Macrinus himself has managed to visit Deultum (Jurukova 1973, 23). Concerning the coinage with the name and portrait of *Caesar* Diadumenian, Jurukova describes it with only one sentence, noting that it does not differ from the issues of the father (Jurukova 1973, 23), thus failing to recognize a possible connection between the medallion published by Todor Gerassimov and the Deultum coinage for Diadumenian.

The peculiarities of the Deultum coinage for Macrinus and Diadumenian have been analyzed by Dilyana Boteva within the entire complex of sources on Lower Moesia and Thracia for the period AD 193–217/8 in her PhD thesis, defended in 1994 and published in 1997. In her opinion, numismatic evidence from both Lower Moesia and Thrace argues easily in favour of Diadumenian's probable presence in the lands south of the Danube River, while for Macrinus such a possibility is totally excluded. "The assumption that when busy in Syria the emperor sent his son on military mission to the Danubian limes soon after the latter was proclaimed Caesar, does not contradict the data known so far. (…) If this solution is correct, it explains the numismatic evidence of an imperial visit to Lower Moesia and Thrace during the first half of Macrinus reign." Coins suggesting Diadumenian's presence are issued in the mints of Nicopolis ad Istrum, Marcianopolis, Deultum and Byzantion. In addition, epigraphic evidence hints that Histria probably also hosted the *Caesar* (Boteva 1997, 328). "The historical background thus reconstructed argues plausibly for a re-assessment of the medallion with the name and portrait of Diadumenian on the obverse and the name of Deultum on the reverse that is considered at present a forgery. Indeed, all evidence for Lower Moesia and Thrace under Macrinus says it is authentic and not a forgery." (Boteva 1997, 329).

Without any mention of the doubts concerning the medallion's authenticity, Costadin Kisiov, Ilya Prokopov and Constantin Dotchev include the medallion here under discussion as one of the artefacts, forming the numismatic riches of the Archaeological Museum – Plovdiv (Kisiov, Prokopov, Dotchev 1998, 54, no 224).

In 2006 (in Bulgarian) and in 2007 (in English), Dimitar Draganov published a direct response to Boteva's 1997 challenge regarding the medallion. After studying the respective numismatic artefact personally, he was "also convinced that it is a modern forgery", adding that "this conclusion is based on numerous observations, some of which have been made already by the scholars who first published it" (Draganov 2007, 181, with footnote 10).

## Data

This historiographical picture urged an attempt to find an indisputable proof, either in the direction of the medallion's inauthenticity or of its authenticity. Accordingly, a step in this direction was taken within the project "Measuring ancient Thrace" through metal analysis performed by

Assoc. Prof. Dr. Boika Zlateva on June 2nd 2023, at the Archaeological Museum – Plovdiv.[2] The portable XRF instrument used for this study was a Bruker Titan S1 spectrometer equipped with a Fast Silicon Drift Detector (SDD) cooled by Peltier elements and resolution of the order of 160 eV FWHM at 6 KeV. The excitation source of this instrument was a Rh target X-ray tube, 4W, 40 kV, with a spot size of 3 mm and five positions automatic filter change.

The small-sized spot (about 3 $mm^2$) is cleaned by a diamond drilling machine to remove patina and to obtain the original metal alloy. The RSD (relative standard deviation) is estimated of four independent measurements and is in range 8.0-10.2%.

The results from XRF measurements (**Fig. 2**) show that the original metal alloy is made on the basis of a semi-red brass combination of copper and zinc in a ratio of 8/1; this means that the original metal alloy is made from a very common metallurgical process. The concentrations of all other elements do not exceed 0.2% (mass).

BRUKER

**PROTOCOL**

for the results from XRF measurements of the elemental compositions of the Deultum medallion with the name and portrait of Caesar Diadumenian on the obverse, executed with a portable Bruker Titan S1 spectrometer

(Results are given in mass percentages, %)

| P | Ti | Cr | Mn | Fe | Co | Ni | Cu | Zn | As | Ag | Cd | Sn | Sb | Pb | Bi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.09 | < LOD | 0.067 | < LOD | 0.06 | < LOD | < LOD | 84.79 | 11.66 | 0.2 | 0.11 | < LOD | 0.15 | 0.16 | 0.09 | < LOD |

Plovdiv, June 2nd, 2023

Analysis executed by Assoc. Prof. Dr. Boika Zlateva

**Fig. 2.** Protocol for the results from the XRF measurements of the elemental compositions of the Deultum medallion.

It is well known that the melting point of the alloy decreases and the melted metal achieves higher fluidity when the concentration of lead is in the range of between 3 and 5%. In this case, we can conclude that it is due to the presence of lead in the ore, and it was not intentionally added to the alloy (Scott 1991).

The intentional addition of tin (up to 5%) and arsenic (up to 3%) to the alloy aims to produce a lighter shade of the bronze alloy to achieve similarity to the objects made of gold. In our case, however, the finding shows a level of As 0.2% and Sn 0.15%.

Another common trace or minor element in Cu-based artefacts is iron, which is mainly present with copper as copper-iron sulfides or as an iron oxide. This element could come from the impure copper ore or the fluxing compounds used during the smelting process. An amount of about 0.05 wt.% is typical of the early processes carried out under poor reducing conditions, while content higher than 0.3 wt.% indicates a more efficient process and, therefore, the iron content could evidence the advanced technological competency and skill of the smelting operator (Craddock, Cowell et al. 2010).

In the elemental compositions of the medallion are found some Ag and As (0.11 and 0.16% resp.) and Ni below the limit of detection of the used method (LOD). This is indicative that copper ores of nickel arsenide had not been used, but it is possible that copper arsenide arsenic ores were in fact used. All other elements are found as normal impurities in the used ores, and their

[2] The authors extend their sincere gratitude to Assoc. Prof. Dr. Kostadin Kisiov (Director of the Archaeological Museum of Plovdiv), and Chief Assist. Prof. Dr. Desislava Davidova (Head of the Numismatics Department at the Archaeological Museum of Plovdiv) for their support and cooperation during the research.

levels are not statistically significant.

Accordingly, the elemental composition of the Deultum medallion for Diadumenian is indicative rather of its authenticity and not inauthenticity.

## To conclude

The elemental composition of the Deultum medallion, bearing the name and portrait of Caesar Diadumenian, provides further proof that this numismatic artefact could very well be an authentic ancient object. Its physical features (colour, thickness, rounded edge and lack of patina), being so remarkable and distinguishable, would make the medallion easily recognisable if it were a forgery, which could not serve any modern forger. The alternative would be that the medallion is an authentic object, and the experts' immediate task is to find a reasonable explanation for all its iconographic and physical peculiarities. And if this is an authentic artefact, as proven by metal analysis, one could expect other pieces of such medallions to appear in the future.

### Bibliography

Boteva, D., 1997. Lower Moesia and Thrace in the Roman Imperial System (AD 193–217/8). Sofia University Press (in Bulgarian with a detailed abstract in English after each chapter).

Craddock P., Cowell M., Hook D., Hughes M., La Niece S and Meeks N., 2010. Change and status: the technology of Dark Age metalwork from the Carpathian Basin. In: Technical Research Bulletin. British Museum, D. Saunders (ed.), Archetype Publications Ltd., Vol. 4, 55–65.

Draganov, D., 2007. The Coinage of Deultum. Sofia: Bobokov Bros. Foundation.

Gerassimov, T., 1963. Un médaillon faux avec le nom de la ville de Deultum. – Bulletin de l'Institut d'archéologie de Bulgarie, XXVI, 275–277 (in Bulgarian with a short abstract in French).

Goldsworthy, A., 2009. How Rome Fell. Death of Superpower. New Haven / London.

Jurukova, J., 1973. Die Münzprägung von Deultum. Griechisches Münzverk, Schriften zur Geschichte und Kultur der Antike, 8. Berlin: Akademie-Verlag.

Kienast, D., 2011. Römische Kaisertabelle. Grundzüge einer römischen Kaiserchronologie, 5. Auflage. Darmstadt.

Kisiov, C., Prokopov, I., Dotchev, C., 1998. Numismatic Riches of the Archaeological Museum – Plovdiv. Sofia: Hemus Co., Inc. and Agato Publishers Ltd.

Scott, D., 1991. Metallography and Microstructure of Ancient and Historic Metals. 1st Edition, Singapore, The Getty Conservation Institute.

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